The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 800.---Vol. XX.] LONDON, SATURDAY, DECEMBER 21, 1850. [Price 6d.

Registration of Designs.

DESIGNS' OFFICE, 4, Somerset-place, Somerset-house, Dec. 16, 1850.

NOTICE.—The LORDS of the COMMITTEE of PRIVY COUNCIL FOR TRADE having, in pursuance of the authority given them by the Designs' Act of 1850, published, in the *Gazette* of the 22d of November, RULES and REGULATIONS to be OBSERVED by PARTIES wishing to REGISTER DESIGNS under the three separate Acts of 1842, 1843, and 1850,

NOTICE IS HEREBY GIVEN, that PRINTED COPIES of the SAME, as well as DETAILED DIRECTIONS for REGISTERING, and the TABLE OF FEES, as approved by Her Majesty's Treasury, are to BE HAD at this OFFICE, where they will be delivered to parties making application, between the hours of Ten and Four o'clock.

The REGISTRAR will be prepared to RECEIVE DESIGNS for PROVISIONAL REGISTRATION, and SCULPTURE for REGISTRATION, under the Designs' Act of 1850, at this Office, on and after Wednesday, the 1st day of January, 1851.

By order of the Registrar, J. H. BOWEN, Chief Clerk.

EXTENSIVE IRON-WORKS AND MINERAL LEASES FOR SALE, BY PRIVATE BARGAIN.—The BLAIR IRON-WORKS, belonging to the AYRSHIRE IRON COMPANY, situated in the parish of DALRY and county of AYR, consisting of TWO BLOWING ENGINES, FIVE BLAST-FURNACES, FOUNDRY, PIT ENGINES, and other requisite utensils for the furnaces and working the minerals, all in working order, besides nearly TWO HUNDRED WORKMEN'S HOUSES.

The extensive MINERAL FIELDS consist of BLACKBAND, IRONSTONE, COAL, LIMESTONE, and FIRE-CLAY, held under long leases, at moderate fixed rents and royalties, all in the immediate neighbourhood of the furnaces; and the works having a connection with the Ayrshire Railway, command greatfacilities for transit and shipping of the produce. There is a large STOCK of IRONSTONE on the ground, which may be had at a valuation, and considerable progress has been made in the

ERECTION OF MALLEABLE IRON-WORKS,

in connection with the furnaces, which may also be had.—The above are well worthy the attention of capitalists and parties in search of mineral fields.

For further information apply to Mr. Brown, 35, St. Vincent-place, Glasgow.

FOR SALE, BY PRIVATE CONTRACT,—A 49-inch cylinder PUMPING ENGINE, 8-feet stroke, equal beam, with new condensing work, and boiler of 10 tons.—Price £680.

A 32-inch cylinder PUMPING ENGINE, 9-feet stroke in the cylinder, and 8-feet in the shaft, with boiler, &c., 10 tons.—Price £550.

Also, a 20-inch cylinder PUMPING ENGINE, of 4-feet stroke, equal beam, suitable for proving a small mine.—Price £100.

For further particulars apply to Capt. Evans, jun., Pool, Cornwall.

LANARKSHIRE.

VALUABLE COAL-FIELDS TO LET in the WISHAW ESTATE, near the junction of the Caledonian and Clydesdale Railway, within 14 miles of Glasgow, 5 miles of the great iron-works situated in the district of Coatbridge, and 1½ mile from the large malleable iron-work lately erected at Motherwell.

These coal-fields will be let for a term of years, in allotments averaging from 70 to 120 imperial acres each. Those now to be let consist of the four upper seams of excellent coal, which give a total thickness of about 23 feet, and the whole are workable at a very moderate depth from the surface.

For particulars apply to Mr. Donald Lindsey, accountant, 57, George-street, Edinburgh; Messrs. Dundas and Wilson, C.S., 16, St. Andrew-square, Edinburgh; or to Mr. James Miller, Wishaw, by Motherwell, who will show plans and measurements of the areas of the different lots, and also sections of the going coal-works in the same estate, and marching with those allotments and divisions now to be let.

MINES.—TO BE LET, ON LEASE, the WHOLE, or a PART, of the very valuable MINES of COAL and IRONSTONE remaining to be got in the FENTON PARK ESTATE, which consists of the PATCHES FARM, the YEW TREE FARM, and the FENTON PARK FARM, containing together 197a. 0r. 37p., or thereabout, situate at FENTON, in the parish of STOKE-UPON-TRENT, and county of Stafford.

This Estate is distant from the canal, at Stoke, about 1 mile. There are many shafts in the estate, which are sunk through nearly the whole of the ironstone measures. The ironstones are of good quality, and there is an abundance of ironstone in the ground. According to sections taken in the Fenton Park Estate, and in adjoining property, there is a thickness of ironstones 10 feet 4 inches, cropping out on this estate. The inclination of the strata is about 10 in 36.

There is in this estate, within a moderate depth from the surface, a sufficient quantity of good coal for the purposes of calcining the ironstone and working the engines.

The deeper mines of coal in this estate are of a superior quality; and if it be required they would be let along with the shallow mines of coal and the ironstone. The ironstone mines would be got very cheap, and there would be no water to draw in getting them.

There are several small engines and colliery utensils on the estate that would be taken to by the lessee at a valuation.

For any further information respecting these mines apply to Mr. Charles Bromley, of Motley, near Darlaston.

NAP DOWN CONSOLS SILVER-LEAD MINING COMPANY,—COMBMARTIN, NORTH DEVON.

OFFICES—No. 80, OLD BROAD-STREET, LONDON.

In 3000 shares, of £2 each.—Deposit £1.

CONDUCTED ON THE COST-BOOK SYSTEM.

Bankers—Messrs. Masterman and Co., Lombard-street, London; and the National Provincial Bank of England, Barnstaple.

Purser—William Thorne, Esq., Barnstaple.

Secretary—Mr. James Lane, No. 80, Old Broad-street.

The following are some of the advantages under which this Company will commence operations:—

1. The lodes have been laid open to such an extent, that returns may soon be made.

2. The works are in progress of clearing, and a splendid new combined cylinder steam-pumping engine, built by Sims, of 100-horse power, with an entire set of pumps, are ready for work.

3. Labour is plentiful and coals cheap, and there are smelting-works in full operation close to the mine.

This Company may be fairly stated as one of the finest opportunities ever presented to the notice of the public for engaging in a highly profitable undertaking, at a very moderate expenditure. An extraordinary and important discovery has recently been made by shoding on the back of the main lode—nearly 2 tons of silver-lead have been raised in blocks of from 1 to 8 cwts. each. The lode, at this depth, carries a fine gossan, rich in silver; and in the purser's report of the 25th November last, he says—"On Saturday last several pieces of solid ore were discovered in ground that has never been explored—the largest piece weighing 364 lbs., and is an exceedingly splendid specimen."

In addition to the rich deposit of lead and silver with which the mine is stored, there is likewise a copper lode, of a promising description, from 3 to 3½ feet wide.

Applications for shares to be made to Mr. Thos. Allsop, stock and sharebroker, No. 1, Royal Exchange-buildings—to whom all communications may be addressed, and of whom prospectuses and plans may be obtained.

EAST WHEAL GEORGE MINING COMPANY.—At a Bi-monthly Meeting of the adventurers, held at the offices, No. 25, Fleet-street, on Tuesday, the 10th December, 1850, pursuant to notice,

GEORGE WHITMORE, Esq., in the chair,

The list of adventurers was read; the report of the committee, with abstract of accounts, was also read.

The reports received from Capt. Lean and Capt. Pomroy were submitted to the meeting.

Moved by James Whitmore, Esq.; seconded by W. Elmslie, jun., Esq.

That the report, with the accounts, now read, are deemed highly satisfactory by the meeting, and that the same be duly received, and entered in the cost-book.

That an abstract of the report and accounts submitted to this meeting be printed and transmitted to the several adventurers.

That the thanks of the adventurers are due to the committee for the labour and time bestowed by them in attending to and promoting the interests of the adventurers.

That the thanks of the meeting be given to W. E. D. Cumming, Esq., as purser, for his gratuitous services and personal attention on visiting the mine; as also to Mr. Henry English, for the services rendered by that gentleman, and the use of his offices.

That the proposition submitted by the committee of conducting the business of the mine henceforth at the offices, No. 2, New Broad-street, City, in accordance with the arrangements made, be approved.

That the committee for the ensuing two months be composed of Messrs. W. E. D. Cumming, George Whitmore, John Young, and Henry English. GEORGE WHITMORE.

The above being carried unanimously, it was—

Moved by W. E. D. Cumming, Esq.; seconded by J. Young, Esq.—

That the thanks of the adventurers are due to the chairman, and are hereby given, for the services rendered by that gentleman in promoting the objects of the adventurers, and for his conduct in the chair.—Carried unanimously. HENRY ENGLISH.

UNDER BRITISH AND FOREIGN LETTERS PATENT.

HUTCHISONISED STONE, BRICKS, &c.—TO LAND PROPRIETORS, ENGINEERS, ARCHITECTS, &c.—The SOFTEST STONE, CHALK, GYPSUM, CLAY, SAND, &c., INDURATED AS HARD AS GRANITE—will never vegetate nor disintegrate, being impervious to atmospheric action, &c.

For all Foundations, external and internal Buildings, Docks and Sea Walls, Sewerage, Paving, Decorative and Monumental Works, the HUTCHISONISED MATERIALS are unequalled for durability and low cost.—*(See Testimonials and Prices.)*

PASTEBOARD, SOFT WOOD, and other ABSORBENT MATERIALS, rendered WATERPROOF, and imperishable from weather, vermin, &c.

LICENSES GRANTED ON LIBERAL TERMS.

Apply to Wm. HUTCHISON, Hutchisonised Stone Works, &c., Tunbridge Wells, Kent.

MR. JAMES CROFTS tenders his SERVICES to CAPITALISTS for the PURCHASE of BRITISH MINING SHARES, whether on a large or small scale; and will be happy to indicate such mines as present the greatest chance of permanent dividends, or ultimate success of the workings, either at the request of his correspondents, or in reply to specific inquiries. The utmost punctuality in attending to communications from the country may be relied upon; and by transacting business only for PRINCIPALS, Mr. Crofts hopes to establish an identity of interests between his friends and himself.

Judicious Purchases in Established Dividend Mines will Insure a High Rate of Interest per annum, varying from 15 to 20 per cent.

Mr. Crofts has specially for Sale—

East and South Tamar	Great Wheal Baddern
Wheal Fortescue (20 shares)	Wheal Harris (20 shares)
Bodmin Consols (20 shares)	Llynmalees (5 shares)
Hennock (10 shares)	East Sharp Tor (10 shares)
Tincroft (10 shares)	Wheal Mary Emma (4 shares)
South Tamar (40 shares)	Wheal Russell (4 shares)
East Tamar (45 shares)	West Wheal Russell (4 shares)

Mr. Crofts issues a Price Current of Mining Shares twice each week, which may be had on application.

Dated No. 4, King-street, Cheapside, December 20, 1850.

MINING AND GENERAL AGENCY AND AUCTION OFFICES,—52, *THREADNEEDLE STREET, LONDON.*

Messrs. R. TREDINNICK & CO. beg to inform their Friends, Capitalists, and the Public, that their SALES, BY AUCTION, of MINING, RAILWAY, & OTHER SHARES, take place every WEDNESDAY, at Twelve for One o'clock precisely, at their SALE ROOMS, in the HALL OF COMMERCE—commencing on the 18th inst.

Messrs. TREDINNICK & CO. hope that the arrangements they have made will afford that convenience and advantage to those embarking in mines, railways, &c., so desirable and necessary to ensure the ready and effective purchase and sale, and which the importance and magnitude of such property demands.

SHARES of every description BOUGHT and SOLD ON COMMISSION, and MONETARY MATTERS of every kind NEGOTIATED; Market Value of Shares, Statistical and other Information afforded gratuitously, upon application.

Messrs. T. & Co. offer to the mining world the opportunity of exhibiting in their Public Sale Rooms, Reports, Plans, Sections, and Specimens of Mines and Mineral Districts, whether situate in the United Kingdom, Foreign, or Colonial Possessions, upon forwarding the same, free of expense; as well Plans, Sections, and Valuations of Estates, Houses, and other Property for sale.

They subjoin herewith a List of Mines, situate in the best mining districts of the United Kingdom, to which they especially beg to draw public attention, as offering desirable inducements for investment, many of which pay dividends of 10, 15, 20, and 25 per cent. per annum upon the market value of shares, whilst others, from capital subscribed and expended, are on the eve of paying dividends, but selling at corresponding low prices. The impetus given to British mining by the improved and firm position of the metal markets—the prosperity of the manufacturing districts—the superabundance of money, with the stable condition of the Government and its revenue, added to the success of the country in its various channels—at peace with the whole world, is to them one of the most pleasing and satisfactory character, and they have no doubt but 1851 will prove to England one of the brightest and most successful epochs in its commercial history.

Plans and Sections, together with Reports of Mines in every district, obtained from practical agents at the shortest notice, and upon the most economical terms.

Commission 2½ per cent. on shares under £100, and 1 per cent. on those above.

To prevent disappointment and inconvenience, they respectfully request that shares be entered for sale at auction two days previous to sale; and shares from country correspondents to be forwarded either to Messrs. T. & Co., or to a town agent, two days antecedent to sale. A deposit of 25 per cent. to be paid on all purchases of shares, and the residue within three days thereof.

Conditions of sale, with printed catalogues, may be had on application at Messrs Tredinnick's offices, Hall of Commerce, Threadneedle-street.

Messrs. R. T. & Co. further request that agents and resident shareholders in Cornish and other mines, will forward to their offices, for the inspection of London shareholder in mines the two-monthly statements of accounts, together with other information likely to affect the value of shares; in return for which they will be happy to render them at all times every service in their power, and promote the general success of mining, by diffusing correct and detailed information to the public respecting the position and legitimacy of British mining.

The following is a list of some of the dividend-paying and other mines:—

West Buller	Condurrow	South Tamar
Carn Brea	Cook's Kitchen	Tamar Consols
Seton	East Wheal Frances	The Worthing
Devon Great Consols	East Crinnis & Pembroke	Trefusis
Stray Park	East Wheal Russell	Tremayne
Treviskey and Barrier	East Wheal Crofty	Treleigh Consols
Tincroft	East Wheal Reeth	Wellington Mines
South Bassot	Gustavus Mines	West Goginan
South Frances	Great Wheal Baddern	West Polgooth
North Basset	Hawk's Point	West Seton
Wheel Reeth	Holmbush	West Frances
Levant	Lewis	West Wheal Jewel
South Tolgus	Linares	West Treasury
East Wheal Rose	Pen-y-bank and Erglodd	West Par Consols
North Pool	Pendarves Consols	Wheal Tryphena
Alfred Consols	Peter Tavy and Mary Tavy	Wheal Harriet
Bryn-Arian	Rock Mines	Wheal Margaret
Comfort	St. Aubyn and Grylls	

MR. EVAN HOPKINS, C.E., F.G.S., &c., CONSULTING MINING ENGINEER,

OFFICE, No. 13, AUSTINFRIARS, LONDON.

Mr. HOPKINS may be consulted daily by Noblemen, Gentlemen, and Capitalists, who have invested, or may wish to invest, their capital in MINES or MINERAL PROPERTIES, on all matters connected therewith (Home and Foreign).

This office is the only one of the kind in the kingdom. No dealings in shares—is independent—having no connection with any party.

To avoid abuses, it is requested that no notice will be taken of any representations respecting mines—be they *favourable* or *unfavourable*—without being authenticated.

The object is to see justice done to the capitalists and property, and consultations on questions connected with general science.

*** Every description of Mineral Property inspected and reported on—on the Continent as well as the United Kingdom, and distant capitalists may receive periodical advice.

N.B.—Being a responsible and confidential business, and having a very extensive connection, it becomes necessary to acquaint those who apply for reports, that they must be paid for on delivery, at his office, otherwise they cannot be attended to.

MR. J. C. NESBIT, F.G.S., F.C.S., CONSULTING AND ANALYTICAL CHEMIST.

LABORATORIES—38, KENNINGTON-LANE, LONDON.

Mr. NESBIT gives PRIVATE INSTRUCTIONS in CHEMICAL ANALYSIS, and may be consulted on subjects connected with the Composition, Working, or Assaying of Minerals.—Analyses of Minerals, Slags, Soils, Manures, &c. &c., performed as usual, on moderate terms.

CHEMICAL ANALYSIS, &c.—ANALYSIS and ASSAYS, or INVESTIGATIONS of ANY KIND, are UNDERTAKEN at the COLLEGE OF CHEMISTRY, LIVERPOOL.

Professor—Dr. SHERIDAN MUSPRATT, F.R.S.E.

Hon. Assistant—Mr. JOSEPH DANSON, F.C.S.

A list of Fees for Analysis, and for Students Working in the Laboratory, may be obtained by writing to Dr. Muspratt, College of Chemistry, Liverpool.

CRAUFURD HOUSE

CLASSICAL, MATHEMATICAL, & CHEMICAL SCHOOL, *MAIDENHEAD, BERKS.*

In this School it is sought to combine the development of the physical, moral, and intellectual powers with the acquisition of knowledge, and to make the course of study an introduction to the pursuits of life.

Craufurd House, with capacious dormitories, dining, school, and play rooms, was erected four years ago, expressly for educational purposes; and since that time the establishment has been exempted from illness. The situation is elevated, in the vicinity of the Thames, the scenery extended and picturesque, the air bracing, and the grounds comprise 14 acres.

Besides the usual studies of Classical Schools, GERMAN and FRENCH are spoken—the latter language daily, with the assistance of natives, until Four o'clock. Mathematics are taught, theoretically and practically; there are drawing and singing classes. Physical science is pursued progressively, and the recently erected laboratory is devoted to chemical analysis, now so essential to the miner, agriculturist, and manufacturer.

Mr. J. D. M. Pearce, A.M., will be happy to forward prospectuses and references in answer to applications.

GAS!—GAS!—GAS!—GUISE'S CONICAL SHADOWLESS GAS BURNER is SUPERSEDING EVERY OTHER BURNER of the day. It is now being generally ADOPTED in TOWN and COUNTRY, with very great advantage to consumers. The LIGHT is PURER and WHITER than that from any other burner. Though the gas flame is doubly deflected, a common straight chimney is employed to produce the draught, so that if broken it is easily replaced.

The CATOPTRIC REFLECTOR is a most important feature of this invention; both may be had of all respectable gas fitters, and at GUISE'S GAS BURNER MANUFACTORY, 45, CLERKENWELL-GREEN, LONDON.—None are genuine unless marked "Guise's Patent."

TESTIMONIAL.

I have tried several comparative experiments with Guise's Conical Shadowless Gas Burner, and I consider it to give a purer and whiter flame than I have yet seen produced by any other burner. ISHAM BAGGS.

STEAM-ENGINE.—WANTED TO PURCHASE, a NEW or good SECOND-HAND PORTABLE HIGH-PRESSURE STEAM-ENGINE, of about 32-horse power, with or without boilers, to WORK a ROLLING-MILL in the country.—Apply, with full particulars and price, to Messrs. French and Smith, metal brokers, 14, St. Benet's-place, Gracechurch-street, London.

TO BE LET, in the immediate vicinity of BEDDGELERT, CARNARVONSHIRE, EXTENSIVE SLATE AND FLAG QUARRIES. These quarries are of a first-rate quality, and admit of being worked on a grand scale. Unlimited water-power for machinery on the spot. Transit to shipping easy, and distance short.—For particulars, enquire of D. M. Allen, Esq., Uxbridge-place, Carnarvon.—All offers to be pre-paid.—Dec. 16, 1850.

TO ENGINEERS, CONTRACTORS, IRONFOUNDERS, &c.—The Directors of the CORK AND BANDON RAILWAY COMPANY are desirous of RECEIVING TENDERS for the PURCHASE of the WHOLE, or a PORTION, of a LARGE NUMBER of BEST STAFFORDSHIRE MALLEABLE IRON ROUND BARS, 2 inches diameter, and 23½ feet in length. About 400 of these bars have been manufactured into tie bolts, which have strong wrought-iron heads and screw ends, with double nuts; the length of the bolts between the heads and nuts is 22 feet 8 inches.

None of the iron bars or bolts have been used; they will be delivered on the quays of Cork, if required.

Further particulars may be had at the Company's offices, 20, South Mall, Cork, where tenders are to be addressed. By order,

Company's Offices, Cork, Dec. 14, 1850. H. WILLIAMS WOOD, Secretary.

TO FOREIGN CAPITALISTS OR OTHERS.—TO BE DISPOSED OF, a very VALUABLE PATENT FOR FRANCE, and also ONE FOR BELGIUM, both taken out in the year 1848, for an Invention for which Letters Patent had previously been granted for Great Britain and Scotland, and which is now in successful operation in many of the large mining districts. The price at which the above would be sold will yield a very large return upon the purchase-money.

Full particulars may be obtained by addressing a letter (pre-paid) to "L. M.," at the office of the *Mining Journal*, 26, Fleet-street, London.

BODMIN MOOR CONSOLS, and WHEAL TOM, DEER PARK.—Notice is hereby given, that the OFFICES of the above Mines are REMOVED to No. 11, AUSTINFRIARS, CITY, where prospectuses and reports can be had.

11, Austinfriars, City, Dec. 10, 1850. HENRY HORNE, Purser.

MINING COMPANY OF WALES.—PROSPECTUSES, containing REPORTS on the MINES and QUARRIES of the COMPANY, Terms and Conditions for its Government, &c., may be had of ST. PIERRE FOLEY, Secretary, to whom letters on the allotment of shares, and on the general business of the Company, are to be addressed.—Offices, 24, Lincoln's Inn-fields, London.

MINING PROPERTY.—BUSINESS transacted in every description of MINING PROPERTY, SHARES BOUGHT and SOLD. ADVICE GIVEN to PARTIES as to INVESTMENT, ADVANCES of MONEY MADE on this DESCRIPTION of PROPERTY, Statistics given on Mines, and the earliest information obtained from the mineral districts.—Apply to DURRANT & CO., Mining Sharebrokers, 58, Lombard-street.

MINING SHARES.—Mr. JOHN CREFT, No. 1, ROYAL EXCHANGE-BUILDINGS, LONDON, OFFERS his SERVICES, ON COMMISSION, to BUY and SELL MINING SHARES, and will select for capitalists those with the greatest chance of success, and take pleasure in furnishing a list of prices, together with all particulars.

MINING OFFICES,—48, THREADNEEDLE-STREET, LONDON.—Messrs. T. FULLER & CO., beg respectfully to inform the public that they are in a position to BUY and SELL SHARES in all the DIVIDEND-PAYING MINES, and have on hand Devon Great Consols, Levant, North Ventou, West Caradon, Bedford United, Peter Tavy and Mary Tavy Consols, South Carn Brea, Warleggan Consols, Calstock Consols, Wheal Russell, East Wheal Russell, West Goginan, Wheal Harris, &c. &c.—Mining shares pay from 15 to 30 per cent.

MINING OFFICES, ST. MICHAEL'S CHAMBERS, *ST. MICHAEL'S ALLEY, CORNHILL, LONDON.*

Mr. R. TRIPP, MINING AGENT, has FOR SALE SHARES in most of the best DIVIDEND-PAYING MINES and others, which will pay the purchaser, at present prices, rom 15 to 35 per cent.

MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock.

MR. JOHN DAVIES, MINING SHAREBROKER, *No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.*

MR. JOSEPH J. BAKER, METAL BROKER AND GENERAL COMMISSION AGENT, WOLVERHAMPTON.

OFFICES—MARKET-PLACE.

MR. JAMES STRIDE, MINING SHARE AGENT (LATE OF SPRING-GARDENS),

No. 111 B, JERMYN-STREET, ST. JAMES'S, LONDON.

MESSRS. BOXALL & CO., MINING SHARE DEALERS, *5, CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.*

JAMES LANE, MINING SHARE DEALER, *80, OLD BROAD-STREET, LONDON.*

MINING, RAILWAY, AND AUCTION OFFICES, *52, THREADNEEDLE-STREET, LONDON.*

Messrs. R. TREDINNICK & CO., in thanking their friends and the public for their patronage at the Sale of Mining and Railway Shares, on Wednesday last, hope, by strict attention to the interest of all parties, to receive a continuance of their support.

Owing to Christmas-day falling on Wednesday, the NEXT SALE will be HELD on WEDNESDAY, the 1st day of January, 1851, and continued weekly.

Messrs. TREDINNICK & CO. request that all ORDERS of SHARES FOR SALE be FORWARDED to them not later than MONDAY, the 30th inst., so as to allow their insertion in the catalogues, issued on the day preceding their sale.

RAILWAY SHARES, CONSOLS, ENGLISH & FOREIGN STOCKS, and MINING SHARES, &c., BOUGHT and SOLD at the CURRENT PRICE of the day, either for Money or the Account.—CASH ADVANCED upon approved RAILWAY SHARES, for given periods, on moderate terms.

COUNTRY AGENCIES UNDERTAKEN.

A daily and hourly list of prices may be seen, and every information given, either for investment or speculation. BROAD & CO.,

No. 9, BELL-YARD, DOCTORS' COMMONS, LONDON.

ROYAL SANTIAGO MINING COMPANY.—The Directors hereby give Notice, that the HALF-YEARLY GENERAL MEETING of the shareholders will be HELD at the office of the Company on Wednesday, the 8th day of January, 1851, at One o'clock precisely, when the Directors will make their report.

38, Broad-street-buildings, Dec. 21, 1850.

KUPER & CO.'S PATENT IMPROVED WIRE ROPES. *MANUFACTORY—GRAND SURREY CANAL, CAMBERWELL, LONDON.*

SOLE AGENTS.

FRANCIS and H. J. MORTON,

10, NORTH JOHN-STREET, LIVERPOOL, and 9½, ALBION-STREET, LEEDS.

The great SUPERIORITY and ECONOMY of WIRE ROPES for MINES and RAILWAYS, over Hemp Ropes or Chains, has been fully established by extensive use in all the principal mining districts in the United Kingdom for many years—being cheaper, much lighter, more durable, and a great easing to the engine.

KUPER & CO. request particular attention to their IMPROVED FLAT ROPES, and their very superior mode of stitching; also to their ROUND ROPES, for Inclines, &c., and PIT GUIDES or CONDUCTORS made of very thick wire, and in one length, without joints.

Prices, carriage free to the nearest railway or water station, 56s. per cwt. for round 70s. per cwt. for flat ropes; galvanising, 10s. per cwt. extra.

SIGNAL CORD, galvanised or varnished, of all sizes, for Mines, Railways, &c., from 14s. per 100 yards.

GALVANISED SIGNAL PULLEYS, with brass wheels, 6s. per dozen.

GALVANISED and CORRUGATED IRON ROOFING, GUTTERING, SPOUTING, WATER and GAS PIPES, of all kinds, FIXED and SUPPLIED.

GALVANISED GAS, WATER, and STEAM PIPES, of great strength.

FAIRBANK'S PATENT WEIGHING MACHINES, of all sizes, at very low prices.

ASPHALTED ROOFING FELT, 1d. per square foot.

DRY HAIR BOILER FELTS, of all thicknesses.

PATENT WIRE STRAND FENCING and ORNAMENTAL WIRE WORK, for Railway, Park, and Agricultural Fencing.—F. & H. J. Morton have fixed upwards of 500 miles of this fencing in the last few years.—Price from 1s. 6d. per yard, fixed, complete.

☞ STOCKS constantly kept in LIVERPOOL, LEEDS, and LONDON.

F. & H. J. MORTON,

PATENT GALVANISED IRON AND SPOUTING WORKS,

10, NORTH JOHN-STREET, LIVERPOOL, and 9½, ALBION-STREET, LEEDS.

ON SOME OF THE USES OF PYROGEN IN NATURE.—No. VI.

BY JOHN JOSEPH LAKE.

The *status noscendi* in which we are at present, as regards many of the operations of Nature, renders even a guess at their origin often most uncertain. Yet when the operations of Nature seem to present an analogy with experiment, there is nothing unphilosophical in considering them together, with the view of ascertaining the probability of their common origin. This has been done in the preceding papers on this subject, and the reasonableness or unreasonableness of the suggestions must be tested by the present state of information on the subject; whilst the soundness or incorrectness of the views entertained can only be decided by time, and the results of further investigation and discovery.

The probable origin of the internal heat of the earth has been already referred to the electric currents circulating in its crust, and the discovery of Peltier has been pointed out as developing a principle by which an additional degree of heat may be produced. We now come to the consideration of the probable origin of the surface heat, of which the sun appears to be a leading cause, though in what way it acts is very uncertain. Its rays possess a peculiar property, that renders them destructive of fire when it is exposed to their action, and in which they differ from those proceeding from ordinary fires, which tend rather to accelerate than retard the progress of combustion. There is, however, some resemblance between them, for it appears to be the light rather than the heat rays that impede or prevent combustion, for fires are extinguished even when a substance is interposed that will intercept the heat rays. A strong light from the sun, without the direct action of its rays, also extinguishes fire; but whilst the sun extinguishes fire, it cannot prevent, by direct means, the formation of flame, which presents a remarkable and novel fact to our view—viz.: that the solar rays have the power of overcoming the chemical affinity that exists between carbon and oxygen, but cannot prevent the union of oxygen and hydrogen when once it has commenced. There can be no doubt that it is owing to this that oxygen alone issues from the vegetable world during the day, and carbonic acid during the absence of the sun at night.

The idea of the influence of the rays of light, or whatever it be, from the heavenly bodies, is not new. The effects of the moon upon lunatics, on some persons subject to fits, and many who sleep exposed to it in tropical climates, are well known. I have witnessed instances of the kind, and have known the sun have the same influence upon a youth subject to fits as the moon. The following description of a singular phenomenon appeared in the *Athenæum* (1845, No. 931, p. 858). It was seen at Comrie, in Perthshire, on the 21st August of that year, at eight P.M., two miles west of the village:—

> Immediately to the north of the village of Comrie there is a bold hill called Dunmore, with a pillar, 70 or 80 feet high on its summit, in memory of Lord Melville. The perfect image of this hill and obelisk, as exact, at least, as the shadow usually represents the substance, was observed distinctly projected on the northern sky, at least two miles beyond the original, which, owing to an intervening eminence, was itself not in view. The image was that which the hill and monument present as viewed from the village—that is, the south. Instead of being a shadow on a cloud, it seemed to be the shape of the thing represented *moulded out of the cloud itself*, and this stuck up against the northern sky. The edges of the figure representing those of the pillars, though, of course, less substantial-looking than their granitic originals, seemed as erect and well-defined as the masonry itself, and so also were the harder features of the hill that formed parts of the profile; while those portions of the original covered with wood had in the figure a serrated fringe, exactly as those portions themselves would show if looked at between the eye and the sky. The figure continued visible after it was first noticed for about ten minutes or a quarter of an hour, and was seen and immediately examined by three individuals, so that there could be no illusion. * * * The "Spectre of Brocken" has been explained both by M. Haue and M. Gmelin to be the magnified solar shadow of the objects represented, cast upon the distant cloud, whereas the phenomenon at present under review seemed to be formed or cut out of the materials of the cloud itself, as the latter was not visible beyond the limits of the image, and these materials out of which the image seemed to have been erected, remained visible long after the likeness had ceased. On this occasion the sun had been down for some time, and the moon had only lately risen, and was peeping through some holes in a thick screen of clouds that skirted the eastern horizon, and, of course, far from the line of the Dunmore and image, so that neither of these luminaries had any direct hand in the sketch. The planet Mars, however, though invisible from the station during the vision, owing to an intervening hill, soon afterwards rose to view more resplendent than ever the writer remembered to have seen him before, thus raising suspicions that he had been concerned in the plot; and, upon reflection, it was found that he must have been in about the line at the time. * * We have heard of electrical rays from the various planets having an effect on our weather, &c., but we do not recollect of its having been even surmised that they were capable of thus producing pictures. * * * But assuming for a moment that Mars' rays have the property of dissolving any clouds they are directed against; and supposing further that his rays on that occasion were playing full upon the cloud in question, all except the portion screened from their direct action by the intervening hill and monument, we can thus imagine how the figure could have been formed, or rather left, of the cloud.

The writer of the above was not satisfied with this solution; but offered it as a conjecture. The only thing that seems to be worthy of notice, in connection with the present inquiry, is that it is the idea of a second person on the same point—namely, the possibility of rays from the sun, or a planet, acting so as to produce a dispersion of some kind in matter exposed to their influence, and which, if the same in both cases, appears to be a dispersion of electrical matter, that prevents the progress of combustion in a fire, and scatters all the cloud, except that under the shadow of the hill and monument, in the case at Comrie.

To return to the consideration of the cause of the surface heat of the earth. The whole of this is not to be attributed to the sun; but a very considerable portion is, doubtless, due to the terrestrial electric currents. These pass from the atmosphere into the soil between the tropics, and from the latter into the atmosphere towards the poles. If these currents be the cause of heat in the lower strata, they must be equally a cause of heat when passing into the earth at the equator; and thus the subterranean temperature of these latitudes becomes a surface heat between the tropics. The heat would be greater but for the counteracting effects of radiation, because the great drought prevailing, particularly in the daytime, occasions greater resistance to the passage of the fluid than the moister strata below. This effect I have often adverted to, as being proved by the melting of bell wires, scorching of trees struck by lightning, and dispersion of gold-leaf by an electric discharge.

The discovery of Peltier, that a galvanic current produces heat when proceeding from antimony to bismuth, and cold when travelling in the opposite direction, by which M. Lenz succeeded in producing congelation, presents some analogy with certain observed effects which are connected with the subject now under consideration; for where the electric currents pass from the atmosphere to the earth—that is, between the tropics—great heat is developed; but towards the poles, where they move in the opposite direction, there is the opposite extreme of cold. This is at present a mere idea; but it would not be a very extraordinary thing if it should be found that the atmosphere and the soil act on the principle developed in Peltier and Lenz's experiments; for we know that an extensive portion of the materials of which the earth is composed is metallic; and there is strong reason for supposing that oxygen is a metal in the form of gas, and, perhaps, nitrogen is the same. We have an instance of the possibility of this in mercury, which, when in the state of vapour, is as invisible as either of these gases.—*Ordnance-office, Portsmouth.*

METROPOLITAN SEWAGE.—The recent fatal catastrophe will, no doubt, interest in a lively manner the inhabitants of the great city, already sufficiently incredulous as to the gorgeous system pursuing; and, although the merits of the scheme are kept extremely private, yet many practical persons have doubted the result of constructing vast sewers, say 10 and 12 ft. diameter, having exceedingly diminutive descent, and whose produce requires to be lifted up and delivered into the River Thames as heretofore. Acute citizens are tempted to fear the pestilence which the pumping up of such nauseous produce will create. Persons are now revising the various schemes so summarily rejected by the commissioners, such as operating upon the present sewers with unlimited supplies of water, to be pumped up from the Thames, where the expense would have been easy and definite, and the salubrious effect indisputable. Whereas, these immense sewers, without a corresponding supply of water, will become virtual magazines of filth; for by no other means than torrents of water can they be cleansed, and from whence this water is to be derived no one yet has been able to discover. It is to be hoped that a sound practical examination will now be made of the system which is embarking so much risk and capital, and that a committee will be made to examine the merits of the schemes so honourably propounded by the contributors.

A CERTAIN CURE ARE HOLLOWAY'S PILLS FOR HEADACHES, LOWNESS OF SPIRITS, AND PAINS IN THE CHEST.—A soldier, who had seen much service abroad, suffered for years from headaches, lowness of spirits, and pains in the right side, which so debilitated him that it was found necessary to discharge him from the service. Every attention had been paid to his complaints, both by the army surgeons, and in the hospitals, at last it was decided that he was incurable; but since his discharge he commenced taking Holloway's pills, which have been the means of restoring him to that buoyancy of spirits and excellent health that he had not enjoyed for years.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

THE CONWAY AND BRITANNIA BRIDGES.

In the second lecture on this subject, delivered by Mr. Edmund Wheeler, C.E., at the Literary Institution, Islington, the general construction of the Britannia-bridge was illustrated by a model nearly 11 feet in length, some parts being removed at pleasure, to exhibit peculiarities of structure. The geographical situation of this bridge, the character of the adjacent shores, a descriptive sketch of the masonry, towers, &c., the total weight of iron, cost, dimensions, &c., enabled the audience to obtain a pretty correct idea of the whole. The advantageous introduction of cast-iron in parts subject to compression only was pointed out—every part where a transverse strain, or a tensile force, was exerted, being composed entirely of wrought-iron. A pleasant light is diffused throughout the interior of the tubes by circular glazed windows, 4 in. diameter, formed in the sides, at intervals of 12 ft. The distinguishing peculiarities of the Conway and Britannia-bridges were noticed. The Conway, consisting of two independent hollow beams, lying parallel to each other, supported only at each end; while each line of the Britannia is composed of four tubes, united in the direction of their lengths, thus forming a continuous beam, supported on five points—each original tube reciprocally assisting all the others, from the particular method by which they are united. The ultimate effect of the junction of the four tubes (now forming one) was to throw the top cells into an elongated or stretched condition, and the bottom cells into the opposite state of compression—states exactly the reverse of that which is natural to each part respectively from its own weight, or from any temporary load it may be called upon to sustain. Thus united, the deflections of the tubes at their centres became diminished, and the strength of the whole line considerably augmented. The vertical deflection at the centre of the widest span, from a passing train, is from $\frac{8}{10}$ths to $\frac{9}{10}$ths of an inch; and the effect of the highest wind, broadside, produces a lateral motion at the centre, not exceeding a $\frac{1}{4}$ inch. One of the long tubes of the model bridge being removed was placed on eight small pontoons, and the operation of floating was briefly rehearsed, suitable provisions being made at the piers for the reception of the tube, and for its resting-place on the masonry.

The principles of the hydraulic press being noticed, the application of steam-power thereto was described as the simple principle of direct action—the forcing pistons of the two water-pumps being continued elongations of the piston-rods of a high-pressure steam-engine, which issue at both ends of the steam cylinder, thus obtaining a double action—the relative area of the force-pump to the hydraulic ram being as 1 to 355 nearly. The act of raising one of the large tubes (nearly 2000 tons), its temporary support during the necessary shifting and re-adjusting the chains, previous to a second lift, was performed in miniature by the aid of a model of the great press—a mode of illustration which seemed to be fully appreciated. The attachment of the lifting-chains to the ends of the tubes, and the precautions in case the accidental failure of any part of the machinery, bespeak that high standard of scientific knowledge and experience which must qualify the civil engineer for an undertaking of this kind.

Not the least interesting of Mr. Wheeler's numerous diagrams were enlarged tracings of the fantastic deflections which the tubes were found to exhibit when resting on the building platforms, supported at each end. A pencil fixed to the centre of such a tube near the bottom would, in the course of each 24 hours, describe a very irregular ellipse. At sun-rise the solar rays falling first on the side, then on the top, and, lastly, on the western side, would produce first a lateral motion eastward, then rising vertically till past noon; these succeeded by a lateral motion towards the west, and, lastly, a sinking vertically to the starting point of 24 hours before. Thus every hour's sunshine, those of obscuration, and the force of the wind at different periods of the day, were for two months traced, to the delight of the most enthusiastic meteorologist. The acoustic and magnetic phenomena, which terminated the lecture, were not less remarkable.

THE STEAM-ENGINE.—Messrs. Pole and Thomson, have patented some improvements which apply to the double-cylinder expanding engine. The patentees state that they do not consider it advisable to allow the steam to enter the small cylinder during the whole stroke, but that there is a certain part of the stroke (depending on the degree of expansion to be made use of) at which it is peculiarly advantageous to cut off the steam, by reason that the irregularity in the moving force is then reduced to a minimum. They also consider it desirable that the valves of the engine (which should be of the simplest possible character, and so arranged as to cause the least possible loss in the passages) should be made to cut off the steam at the above-named, or any other desired point of the stroke, without the addition of a separate expansion valve. The improvements intended to effect these objects consist of, "an improved arrangement of valves and apparatus for moving the same, applicable to double cylinder steam-engines, according to which arrangement a single sliding valve is made to answer the purpose of opening the requisite passages to and from both cylinders in the most advantageous manner, and also to cut off the steam from the small cylinder at any required point of the stroke, within reasonable limits, without the addition of a separate expansion valve." Various modes of accomplishing these objects are shown in the drawings attached to the specification.

SAFETY VALVES OF STEAM-BOILERS.—The following important fact, with respect to steam-boiler safety valves, transpired at the inquest on those killed lately by a boiler explosion at Halifax, Yorkshire:—The galvanic adhesion arising from the combination of iron and brass in the seat and disc of the safety valve is not generally known; and is too important to be overlooked by engineers, and those entrusted with the charge of steam-boilers:—Mr. Wilson, engineer, said he had "examined the safety valve, and the result of my examination is to find that the seat is of cast-iron, and the valve is of brass, which, in my opinion, renders the action of the same quite uncertain at any pressure. This has been explained on the principle that steam acting upon these two metals produces what is called galvanic adhesion; a particular instance of which I have noticed from my own experience where the valve had been working freely, and in the course of a very short time I had to use a hammer to remove it from its seat; when afterwards relieved I had enough to do to hold it down by a lever at least four to one. The working pressure of the valve I am referring to was 50 lbs., which, upon calculation, from the pressure required to hold down the lever, could not be less than double that amount. In this case the uncertainty of the action of the valve, with the pressure gauge in the state just explained, may account for a pressure beyond calculation at the time of the explosion. * * * I have no proof in this instance that galvanic action had taken place. The valve seems to have been free, but it is possible it may have occurred, and in my opinion it is a very probable case. This result is likely to happen in a valve only recently made. It depends upon a given quantity of heat and a given temperature of steam. Whenever the pressure is overcome with a brass valve in the seat, it rises gently, but with an iron seat it rises suddenly, and with a noise."

STEAM-BOILER EXPLOSIONS.—At a recent inquest, Mr. W. Fairbairn, C.E., submitted an elaborate report, in which, after showing how the accident occurred, he points out what he considers the most feasible means for averting, or at least diminishing, the number of frightful catastrophes arising from boiler explosions. "It appears to me that a legislative interference in the construction of boilers or machinery of any kind is exceedingly objectionable, and should not be resorted to but in cases of urgent necessity; yet I do not clearly perceive how local regulations, however good and judicious in themselves, would answer the purpose, unless under the control and sanction of the law. I apprehend the assistance of Parliament would be required to carry out the principles I would suggest, as follow:—1. That after a certain date boilers should not be allowed to be placed under buildings where people are employed, and that those now in that position be as speedily removed as possible.—2. That boilers of a waggon-shape should not be worked at a pressure exceeding 10 lbs. on the square inch.—3. That after a certain date every new boiler should be proved up to not more than one-third its bursting pressure, and to three times its intended working pressure. Lastly, that every boiler should be fitted with two safety valves, one to be self-acting and beyond the reach of the engine-tenter, or any other person but one to whom the duty of examination should be expressly intrusted."

STATISTICS OF STEAM-POWER IN FRANCE.—The last statistical returns, relative to the steam-engines and apparatus at present working in France, in all the manufactories and trading vessels navigating rivers or seas, present the following results:—There exist in France 5607 manufactories of various denominations in which steam machinery is employed. This machinery is worked by means of boilers—the number of which is 9288, and of which 8776 were made in French establishments. These boilers represent a force of 65,120 horses' power, calculating the horse-power as 75 kilogrammes (180 lbs.) raised one metre (one yard) per second. These boilers represent the force that would be produced by 195,361 draught horses and 1,367,530 labourers. The steam horse-power is equal in effect to about four draught horses and 21 labourers. The number of boilers employed in the preceding year was only 8023, and only 4033 establishments existed in which steam-power was used. The length of railway now open for traffic is 2171 kilometres (1300 miles), on which are employed 725 locomotives. The number of steam trading vessels is 279. Their tonnage amounts to 40,098 tons. They are propelled by 502 engines, constituting a total power of 22,893 horses. The merchandise transported by these vessels amounted to 730,948 tons. The progress of steam navigation in France is indicated in the following facts:—In 1835 there were 75 steamers, by which 1,038,916 passengers were carried, and 88,140 tons of merchandise; in 1840, there were 211 steamers, 2,547,116 passengers, and 485,589 tons; in 1845, there were 259 steamers, 3,461,336 passengers, and 696,066 tons; and in the last year there were 279 steamers, 2,808,836 passengers, and 730,948 tons. The total number of steam-engines employed by land or sea in France, it would appear from the above statements, amount to 6432; and constitute together a force of 110,178 steam or 330,535 draught horses.—*Journal des Débats.*

THE ANGLO-MEXICAN MINING ASSOCIATION, AND THE MEXICAN AND SOUTH AMERICAN COMPANY.

SIR,—In April, 1849, you were pleased to insert in the *Mining Journal* a letter of mine, enunciating some plain truths respecting certain mismanaged Spanish-American Mining Companies therein named. True it is, that about the period these companies were started, a strange and strong delusion had bewitched the minds of directors and shareholders; but if both parties began by being dupes, it was clearly the duty of the managers of every company, when, after a series of trials, "its playing at pitch and toss with fortune" proved unsuccessful, to realise and husband the few assets remaining, for the purpose of dividing them among the unlucky adventurers. Certain directors, however, of the Anglo-Mexican Mining Association, some of whom are also directors of the Mexican and South American Company, have recently been discovered to have taken a much less common-place and more Hudsonian view of their duty; and "have made things pleasant" for the more favoured company at the expense of the less favoured one, by some very unjustifiable proceedings, which would render the directors referred to personally liable, if the matter were brought by the shareholders before a court of equity.

The proceedings so justly complained of are as follow:—In the year 1846 the Anglo-Mexican Mining Association, after having expended more than 1,100,000*l.* on various Mexican mines, had only at work a single mine, called "the Asuncion," and this mine was then yielding a moderate annual profit. The cash balance at the association's London bankers on the 30th June, 1846, was 2179*l.* 3*s.*, and during the latter part of that year the board of direction appear to have received two remittances from Mexico, amounting together to the sum of 5513*l.* 15*s.*, and, out of these moneys, in November, 1846, certain directors of the Anglo-Mexican Mining Association—to wit, Mr. John Diston Powles, Mr. Henry Ewbank, Mr. Edward Hurry, and Mr. John Stanley—the two former gentlemen being also at the time directors of the Mexican and South American Company, advanced on loan to the latter company the sum of 6500*l.* The 29th clause of the Anglo-Mexican Mining Association's Deed of Settlement is as follows:—"The surplus assets for the time being of the said association over and above the current balance at the bankers, shall be invested in the purchase of Government or Parliamentary stocks, or funds or securities, or in Exchequer Bills or India Bonds;" and it seems clear that if the directors were bound thus to invest all surplus assets, beyond the current balance in such securities, that, *a fortiori*, they had no right to loan surplus assets on any less valuable security.

The only notice taken of the loan in question in the annual balance-sheet presented to the proprietors at the annual meeting, held on the 7th day of July, 1847, is in these terms:—"Lent on security, 6500*l.*" The proprietors, therefore, would very naturally suppose that the sum in question had been lent on some at least of the securities specified in the Deed of Settlement.

The following entry appears in the balance-sheet laid before the proprietors at the annual meeting in July, 1848:—"Loan to the Mexican and South American Company, 6500*l.*;" and in the balance-sheet presented at the annual meeting, held in July, 1849, and which immediately preceded the special general meeting, which decided that the affairs of the association should be brought to a close, in conformity with the 60th section of the Deed of Settlement, the item stands thus—

Loan to the Mexican and South American Company	£6500
Interest thereon at 5 per cent.	—

In October, 1849, the committee for winding up the affairs of the association declared a first dividend of 10*s.* per share, which, on 12,000 shares, is 6000*l.*; but as it appeared to me, upon a careful analysis of the last balance-sheet presented by the board of direction, that the sum that ought then to have been in hand, supposing the money advanced to the Mexican and South American Company had been duly called in, would have yielded a dividend of double the amount declared, I applied to the secretary of the association, on behalf of a very near relative, a large holder of shares, for some explanation on this point, when the secretary, for the first time, officially informed him by letter "that the debt did *not* originate in any loan; but was a transaction entered into between the two companies for their mutual benefit—that it originated in an agreement (an unstamped one, by the bye) on the part of the directors of the Anglo-Mexican Mining Company to take an interest in the mines of Gaunasevi, then worked by the Mexican and South American Company—that in pursuance of this agreement, an advance of 6500*l.* was made on account of capital." And then the secretary goes on very naively to add—"that the undertaking subsequently (that is, I suppose, shortly after the money was paid) assumed so unfavourable a character, that the directors of the Mexican and South American Company determined to abandon the district, and it was decided to put an end to the above-named agreement. That the Mexican and South American Company then admitted the debt (they could not do less); promised to repay the sum with as little delay as circumstances would admit (a very vague promise, indeed, seeing that circumstances did not admit of the payment even of any interest up to June last), and considered as hypothecated for this purpose the entire property of the company in England, Mexico, and Chili." Now, Sir, if this cool statement be all gospel, "the entries in the official balance-sheets of 1848 and 1849, loan to the Mexican and South American Company, 6500*l.*" cannot be true; and equally improper is the sly entry in the balance-sheet of 1847, "lent on security 6500*l.*"

I trust, Sir, you may consider his letter of sufficient importance to justify its insertion in the *Mining Journal*. The best safeguard for shareholders of all classes against the "fantastic tricks" of directors is the public press; and, however culpable those shareholders are who, without the exercise of any vigilant supervision, leave everything to boards of directors, that is a still higher grade of culpability which abuses, for its own selfish purposes, the trust and confidence so unwisely bestowed.

C. RICHARDSON.

Charles-street, St. James's, Dec. 16.

ON THE UTILITY OF THE "MINING JOURNAL" TO THE PRACTICAL MINER.

SIR,—Having for some time past devoted one evening in a week to peruse your useful paper, I feel bound to recommend it as being not only entertaining, but beneficial to all practical miners who thirst after general knowledge. They have there the views of professional men laid before them, and if, after comparing them with what Nature is ever revealing to them in their daily work, they find their theories correct, they can combine them with their own practical operations, and, when armed with such information, they cannot but feel increased confidence in the results of their labours. The majority of our practical miners are uneducated, and this arises from their parents often sending them into mines before they are 10 years of age, and those who come before the public are chiefly self-taught men. Practice and science should be combined, and I think every sensible miner is ready to admit that he is deficient in a portion of scientific knowledge essentially necessary to enable him to bring his observations on Nature's laws advantageously before the public. I am also of opinion, and all professional men, I think, will admit, that the latter are deficient in the practical part of mining, and have never been able to compete, on his own ground, with the operative miner, although their imposing language has induced some narrow-minded men to fancy that every man is a blockhead who is not versed in scientific terms and fossil geology. As a proof of the advantage being on the side of the miner, let us look at the inhabitants of Cornwall, and we shall there perceive that the largest proportion, and wealthiest of them, originated from practical men. They selected the most promising lodes to work on, and took an interest in carrying them out, and, in the end, made fortunes. I ask the name of one professional man who ever visited the county, and, from his geological knowledge, selected a sett, embarked his means in it, and who was enabled to derive a profit from the same sufficient to retire with a like fortune. Without this proof we must claim it as our right to stand in the front ranks; and, in order to maintain that high station, we must rally round our standard, and boldly meet these men of great ideas and scientific language as free traders, without even dreaming of the need of any other protection than we can afford to ourselves. Let us only combine science with practice, and we have none to fear. We have now many advantages not known to our forefathers; first, we have improved schools in every village, and where parents should strain every nerve to keep their children two or three years longer, and then let them read the works of professional men, and direct attention to their views of mining, taking care to engraft on them their own practical knowledge, and showing them where the views of scientific writers were right and where wrong. Let them call the youths' attention daily in their work to what particularly occurs, and make them, as Adam Clarke said, "thinking youths" in the bowels of the earth. Let it, in fact, be their daily school, and, in that case, the mines of Cornwall would continue to send forth young pupils able, in practical and scientific mining, to compete with the entire world. Those engaged in mining should also form societies in every mining district, and, by a small weekly subscription, purchase the most useful books, and hand them over to every member after he had subscribed to the amount of cost price, and, on his returning one, let him receive some other. From this plan, together with the perusal of your Journal, much improvement might be anticipated.

I was surprised in my late journey through Cornwall and Devon, to find your paper in the hands of so few of the working miners. On inquiring the reason, the reply of many was that it came too expensive, they could not afford to take it; others said it was of no use to them. My answer to the former was, let four of you join, and debar yourselves of only half a pint of beer a week, or half an

ounce of tobacco, which you can very well dispense with, and you may then have the Journal.

I strongly recommend the working miner, who has the wish to soar above the level of his fellows, carefully to read your columns, by means of which he will find that he can add power to his practice. Where is there a man fit to take an agency who has not been in the habit of reading your Journal? He there certainly sees occasionally some vague information, but he will also see many valuable reports from able miners, and expressed in such a way as to enable every man conversant with mining to understand them, and the perusal of which cannot fail to assist the young or self-taught agent.

I have no doubt, Mr. Editor, that you would gladly devote a portion of your space to all who would send any communications on mining, likely to be useful or interesting to your readers; were this done, I am firmly persuaded that additional light would be thrown on the operations of Nature, which the mining interests stand much in need of.—N. Ennor: *Wiveliscombe, Dec.* 3.

MINING EXCHANGE.

Sir,—All those interested in mining affairs will, I think, now admit that some arrangements ought by this time to have been made for the formation of a Mining Exchange. The increased and increasing prosperity of mining property, and a very general desire on the part of capitalists to invest in it, *demand* the existence of a responsible establishment and market, where purchases and sales can be effected at equitable rates, and an authorised daily list of prices published; none but mines of a *bonâ fide* character, and which have undergone the surveillance or sanction of the committee, should appear in it, or be dealt in by members of the Mining Exchange.

Without such an establishment, there will always be delay and difficulty in negotiating transactions, which, above all others, from the rapid change in mining property, require, perhaps, to be done with as great or greater promptitude than any. Hence, most of the respectable mining agents and brokers, and dealers in town and country, are anxious for the formation of a Mining Exchange, and would form at once a goodly and numerous body, with the probability of a rapid increase of numbers. If some such arrangements be not speedily made, the mining brokers and others interested will find out, when too late, that the Stock Exchange has taken their business from them, and they will only have to lament their own supineness and want of purpose, which have so frequently been pointed out in your valuable columns.

Cornhill, Dec. 18. A Mining Agent.

LINARES MINING ASSOCIATION.

Sir,—As it appears from the letter of "A Director," in your Journal of last week, that the determination to erect smelting works at Linares is irrevocable, I am loth to continue a correspondence which, by showing that a difference of opinion exists on the prudence of such a step, might prejudice the interests of the association. I must, however, correct "A Director" on one point, as it would otherwise appear that my objections are unreasonable. In his letter he states that, "except from Pozo Ancho, scarcely any ore has been sent for many years from Linares;" but I can assure him that from the district in which the mines are situated a large quantity of ore is annually sent to Seville, greatly exceeding in quantity the ore which is sent from the mines of this association. It is true, the mines do not bear the name of Linares, because that is the name of a village, but a great part of the ore I speak of comes from mines situated even several miles further from Seville than those of Linares. Secondly, the smelting works to which he probably alludes are those of the Spanish Government, the produce of which is required for the arsenals of the country; there is no analogy between them and those which are contemplated by this association, because, in the one case, the works supply the interior of the country, the arsenals must be supplied, and the monopoly allows such a price to be paid for the lead as may be rendered necessary by the expense of smelting; in our case, the lead is to be exported, and we must compete with others in the English market. There is no lead smelted in the district for exportation. I am informed, on good authority, that the only trees growing in any numbers in the neighbourhood of Linares are olive trees, and that the fuel used at the Government works is brushwood.

But no one can desire the success of the company more than I do; and, with good management, I have no doubt it will prove an excellent undertaking. Perhaps brushwood will do for us also, and if it exists in sufficient quantities for a continuous economical supply, as, from the letter of "A Director," would appear to be the case, and if the fuel is not to be brought from a distance, it removes my objection to the proposed smelting works. It is not, however, exactly stated in the letter that wood is to be the fuel used.

Dec. 16. A Shareholder.

MINING IN ST. JUST.

Sir,—I observe in the share list of the 7th inst., a mine situate in this parish, called Wheal Augusta, in 3072 shares, valued at 4*l.* per share. Being long a resident in the parish, I presumed I knew every mine of importance in this locality, and was truly surprised at finding in your list a mine in St. Just valued at more than 12,000*l.*, of which no one knew anything about. On further inquiry, I discovered that it was an *old friend with a new face*, being originally called South Balleswidden, which is an exceeding small affair, not many fms. deep, with little materials, excepting a small water-wheel, which has not been working a month, if it has worked at all. Your pen, Mr. Editor, is required to warn the public of the necessity of the strictest inquiry before embarking in many of the undertakings which are now being ushered into notice, some of which will inevitably prove most disastrous to the county.

St. Just, Dec. 11. A Constant Reader.

PENTIRE GLAZE AND PENTIRE UNITED MINES.

Sir,—In rely to the letter of "T. H.," in your Journal of the 14th inst., in which he states having "visited the sett," which "had considerably improved of late, and was much richer than reported, producing more lead and of better quality," I have to inform him the undertaking will bear the strictest scrutiny; and it is determined to keep within, rather than exceed, the truth! The adventurers in these mines are too upright and too well aware of their position and prospects to allow their captain, even if he were so disposed, which he is not, to put forth any exaggerated reports, or publish from time to time anything that could not be borne out.

We are sure of having at least 15 tons of lead ores per month for market; and, as "T. H." very rightly observes, the adventurers may shortly expect "handsome dividends," as the quantity of ore for market will be greatly increased. I beg also to inform him, through your medium, that a competent mineralogist from London, in conjunction with a practical miner in Cornwall, are about inspecting the mine, for the purpose of reporting to the adventurers their present actual state and prospects, and whose report, after the general meeting, on the 28th inst., will be sent for publication to your Journal, though we feel the report more properly concerns the shareholders than the public.

Tokenhouse-yard, Dec. 20. "Purser."

Specimens for the Great Exhibition.—A letter dated Adelaide, Aug. 30, says:—"The directors of the far-famed Burra Burra have determined on sending specimens of ores for the Great Exhibition of 1851. The collection was thrown open to the public prior to shipment by the *Will Watch* for London; one specimen or block of red oxide, weighing 8 cwts., and containing 44 per cent. of copper, The most striking specimen of the whole is a block of blue carbonate, which has been named the punchbowl, having a diameter of 2 ft. 6 in. by 1 ft. 9 in., and weighing between 2 cwts, and 3 cwts.; the natural hollow in the centre is studded with the most brilliant crystals of different shades, which have a very beautiful effect. Several bottles of olive oil, obtained from the fruit of trees grown in the nursery garden of the South Australian Company, were to be sent to the exhibition."

The Great Coal for the Exhibition of 1851.—We have already noticed this enormous specimen of coal, respecting which we copy the following additional particulars from the *Birmingham Journal*:—"A few days ago this large block of coal was drawn out of one of the pits in the Hange Colliery, Tividale, near Tipton, belonging to Mr. D. G. Round. Upon the first attempt being made, such was the great weight of the coal that the niche ring upon which the rope is wound broke through in two places, it being cast-iron, 6 inches broad and 1 inch thick. A new niche ring being put on, a second attempt was made, when, amidst great suspense, the coal was brought to light up the shaft, 206 yards deep, in the space of three minutes. The waggons being run over the pit, the coal was landed, amidst the shouts and cheers of all assembled. The coal was then transmitted, by an incline railway, about 300 yards, to the wharf, the colliers holding it back by ropes. It had to be brought to the bottom of the pit some considerable distance, the ponderous mass at times breaking the cast-iron rails and sleepers forming the railroad, as it moved slowly along. The weight of the coal itself, exclusive of any chains, &c., is about 5 tons, ascertained by means of steelyards. When lifted to be weighed, the hook by which the coal was suspended broke through, being of wrought iron, 1¼ inch square. The size is 6 feet high and 18 feet in circumference, necessarily of a circular shape to admit it up the pit shaft; the largest size that could possibly be produced, and probably the greatest weight ever attempted to be drawn out of a mine, and must have been attended with great risk to the machinery and ropes. No other than the 30 feet or thick coal seam of South Staffordshire, could allow such a large piece of coal to be produced. Its height, upon the skip and waggon, is nearly 9 feet. It is a fine coal, remarkably bright and clear. We are glad to learn that no accident occured to any of the men. There can be no doubt it will form a very interesting addition to the Great Exhibition, and will attract great curiosity, more especially in London, where the sea coal is principally used. It is worthy of remark that the services of the men were gratuitous in getting the coal and sending it from the mine to the wharf, thus showing the good feeling existing between Mr. Round and his workmen."

J. L. Dampier, Esq., has been appointed Vice-Warden of the Stannaries, in the county of Devon.

MINING IN WALES.

Sir,—I beg to hand you reports of the several mines under our management, which I shall feel obliged by your publishing in the *Mining Journal*.

Goginan, Dec. 18. Matthew Francis.

Allt-y-Crib.—We have laid open the sides of this old mine for a length of between 40 and 50 fms. in the deep adit. The ore is excellent for the whole length. We have also found that it continues up to the Chapel level. After having tried the mine in the different levels within, we have put a party of men on the surface, to try whether it holds up in the sides to the day; and a few feet below the surface we find the sides yield a ton of almost solid ore to the fm. We calculate there is discovered about 30,000*l.* worth of ore in the sides of the old workings.

Bwlch Consols.—In the western mine, called Bwlch Cwm Erfin, the bottom level, or 45 west, is passing into ore ground, worth 45*l.* to the fathom. Doran's shaft, now 5 fms. under the 45, and the deepest point in the mine, or that is yet seen upon the lode, yields 10*l.* worth of ore to the fathom, under ground unproductive above. We expect, after driving the 45 the length of the ore ground westward, which will occupy 12 months, that we shall have laid open 10,000*l.* worth of ore in this level. In the eastern mine, called Twllyrenaid, we have opened ore ground for 13 fathoms in length. This ore ground is seen 60 fms. below in the level Newydd; and I calculate there must be 3000 to 4000 tons of ore within our boundary in this mine. This property is altogether becoming very valuable, and in 1851 will make good profits.

Bronfloyd.—The adit level is driving eastward and westward in ore ground that will leave good profit. We are also sinking from the surface upon the lode, which yields some good ore. We have ordered a crushing-mill, which we expect to erect early in the spring. The lode is very large; and the part we are working is filled with solid plates of silver ore, varying from 4 in. to 1 in. in thickness.

Cargynon.—We are taking down the lode by the side of the deep adit level; it yields about 7*l.* to 8*l.* worth of rich silver-lead ore to the fm.; it is worked a few fathoms below the adit, and we are preparing machinery to draw out the water, when we expect sufficient ore to make fair profit.

Court Grange.—Pen-y-cefn Mine is the most advanced of the mines in this grant, and now yields about 600*l.* worth of ore, at a cost of 300*l.* per month. In the bottom 30 fm. level there is about 300 fathoms of ore ground laid open, worth about 4000*l.* to 5000*l.* The shaft is sunk to the 40 fm. level, and preparations are making for opening the eastern and western ore ground in this level; our last month's returns have been retarded by the replacing of the pitwork, which was insufficient to keep the water. Our last sale was 27 tons, at 16*l.* 13s. 6d.; this month we offer 21 tons, but we expect our regular sales from this mine will be 30 tons.

Cwmboa.—The westernmost mine in the dingle, in which are found the rich silver-lead mines of Cwmsymlog, Bwlch Consols, Cwm Erfin, Cwm Sebon, Daren, and Bronfloyd; this valley might with propriety be called the valley of silver mines. The lode in the adit at Cwmboa differs from most of the mines in the neighbourhood, being composed of soft clay, with nodules of lead, as is the case in the great East Wheal Rose Mine, in Cornwall.

Cwm Sebon.—Arrangements are making for working this mine in a spirited manner. We have good courses of ore in the 40, 50, and 60 fm. levels eastward, capable of yielding 2000*l.* a year profit, and the forefields are most valuable: 25,000*l.* a year has been divided annually on the same lode to the eastward.

Daren.—Francis's adit is now within 2 ft. of holing to the winze under level Coed, and is rich in copper and silver-lead ore, workable at 3s. 4d. in 1*l.* The tribute bargains are turning out very well. The rails are now laying to the end of level Coed, and we expect much ore in clearing the old mine westward. The steam-engine for this mine is nearly completed, and we shall be able to commense draining the western part of the mine next summer. I am satisfied that the ancient workings in this mine eastward were principally made for copper, of which we sold 18 tons last month.

East Pen-y-cefn.—The water-wheel is erected for draining the mine, and there is a most promising orey lode in the shaft. I expect this will make a good mine as we extend our operations.

Llettyn-hen is on the same grant; the shaft is now 8 fms. under the 10 fm. level. In the 10 the gossan had undergone a great change, and we took several tons of high-priced ore from it; we hope in the 20 it will have settled into solid ore. The lode on the surface is similar to Frongoch, and full of gossan for 30 feet wide.

"The Welsh Potosi"—Esgair-hir.—We are not yet doing much in this mine. In one place, where we are laying open the lode in the adit, we have a course of ore, worth 20*l.* per fm. We have all the machinery ready to work, and there is reason to conclude that, by opening the mine systematically, we shall find a great deal of ore. The 28 fm. level westward is reported to be in good ore. The mine is furnished with excellent crushing and pumping machinery, sufficiently powerful to follow the working of the mine effectively for many years, which will immediately be put into operation.

Esgair-fraith (copper).—This mine is upon the same grant as the above mine of Esgair-hir. They were formerly called the Welsh Potosi, and we hope their future produce will justify that cognomen. Our only procedure in this mine has been to clear up a winze under the adit on the copper lode, where we find a course of rich copper ore, 2 feet wide. No property in Wales, or perhaps in England, has created such a *furore* as the Welsh Potosi, when formerly worked to its greatest extent. The Lord Mayor of London and Sir Christopher Wren, the architect, were shareholders. The Duke of Leeds was the chairman of the company, and nearly all the bishops were interested in the mines, and the calculation of the agent was to raise sufficient ore to divide 75,000*l.* in profit per annum; indeed, the manager (Mr. Waller) offered to take a very small per centage upon the profit instead of a large fixed salary.

Gellerheirin.—The adit level is now on the western part of the ore ground; there is a little ore in the lode, but not any of much value. The ground is full of water, and I have no doubt that this portion of the lode is connected with that in the old sinks above, which yielded so much ore in the time of Sir Thomas Bonsall. We expect to find a back of ore ground whole for 26 fms., which ought to yield fully 15,000*l.* worth of ore, and to get into it in the course of a few days.

Grogwinion.—This old mine is fast approaching its former state of produce. On the north lode the shaft is sunk 24 fms. below the adit, and the eastern and western ends are nearly under the ore ground worked in the 12 fathom level. The end of the long drift, 80 fms. below the surface, is in ore, worth about 10*l.* per fm.; 30 fms. east of this, and 70 fms. above it, we have ore for about 2 ft. wide, in a winze from surface. The eastern and western ends of the deep adit are in a beautiful lode, with branches of solid ore. The last sale of this ore, last week, which is without silver, brought 14*l.* 10s. per ton, and we have again a small parcel under sale.

Guskis.—This is an ancient tin and copper mine, situated, as I conceive, in almost the best position for a great deposit of metals. Arrangements are made, and I am now completing the drawings for an 18-ft. water-wheel, 6 ft. wide upon the breast, for the purpose of draining it. The old workings for tin are only carried down for a few yards below the adit, and the lode, as seen in the adit, is of the most promising character. The arches are full of tin, and the whole parts of the vein are composed of beautiful gossan. The metallic influences in action coming up from the open bay on the south-west, after depositing the ores of Wheal Neptune, Wheal Wellington, Wheal Speedwill, and others, touch the great Relubbus cross-course—along the sides of which the ends of the lodes abutting upon it, densely charged with metal, have yielded hundreds of thousands of pounds sterling worth of ore. More feebly, afterwards, they have formed in the eastern side of the cross-course Wheal Nut, or the Lewis Mines—the agents of which deserve great credit; and, for making such large profits from tin so thinly disseminated, are more entitled to the compliment than the self-styled model miners; for I conceive the best model miner is he who can produce the largest profit from the poorest mine. The workers of West Providence appear to me to deserve great credit also for similar qualities. An antiquated specimen of the Cornish agent, still I do not despise new lights; and I might further theoretically trace the great metalliferous current through the Wheal Alfred on to the Camborne district, where, sweeping around Carn Brea, it steeps its lodes in riches, and loads the Gwennap veins with metal; but I fear to indulge in theory, as I may incur the censure of my old friends, who dislike pretensions to oracular powers. I will, therefore, descend to practice, and conclude by suggesting that Guskis will, at any rate, be a cheaply-drained mine, as it will be accomplished by means of a small water-wheel; and we shall then see what she is made of, and what can be made of her.

Llawr-cwmbach.—We have just put a very beautiful little water-wheel and lift of pumps to work upon this mine, which in a couple of days took out the water, and we are now at work upon the lode, which wears an encouraging appearance.

Penrhiw.—We are taking the water out of the mine, and hope to have it shortly in fork, to come at the ore ground above the 36 fm. level. Our neighbours to the eastward have expended from 8000*l.* to 9000*l.*; their ore ground is dipping into our engine-shaft, and I calculate, in depth, that we shall have a good range of profitable ground, as we have one of the finest lodes in the country.

Rhewrhiggus.—We have been clearing the adit level during the past month—the lode looks well, and I think we shall find some good ore ground below the adit. In two sinks below the adit, but a few fathoms in depth, we are informed that there are good courses of ore, yielding, it is said, a ton to a fm.

Rhydbulog.—This mine, situated on the southern confines of Cardiganshire, may, in reality, be considered a silver mine, as its ores are richer for silver than lead, containing 86 ozs. of silver to the ton. We are now preparing a water-wheel and pumps to drain the mine, which is said to be 26 fms. deep; and from the shaft and two short levels, and 50 fms. of stopes, altogether not exceeding 100 fathoms of ground, it is reported that 1800*l.* worth of silver and lead have been sold. If this report is true, the whole ground must have yielded 18*l.* worth of ore to the fathom—an amount quite sufficient in these days to leave a large residue of profit.

South Lisburne.—We have laid open ore ground on the lode for a length of 60 fms. for about 9 ft. deep, the gossan and ore coming up to the surface, and I believe evincing a certainty of a very rich deposit of ore.

West Nant-y-Mwyn.—Since our commencement in October, we have uncovered to the rock four of the Great Nant-y-Mwyn lodes; but we have not succeeded in getting down to the rock on the main vein, along the line of which there is much boggy ground and springs, from which have been ejected considerable quantities of lead ore. Where we are trying to see this lode in the rock, we have found a great deal of tumblers of lead; but we found it necessary, in order to see the lode in the first stratum, to make a very large open cutting, which, for the future, will occupy our attention until the lode is fairly laid open. From the veins already seen, I have no doubt about the propriety of driving up an adit level from the river upon the main lode, and cross-cutting the others.

Dec. 19.—Since writing my report, we have drained the water from Penrhiw, and we have to report a good course of ore in the 26 west, the stopes over the 36, and the 36 end westward.—Also the discoveries in Allt-y-Crib continue increasing. There is ore in every end and stope, and a very fine course of ore in the shaft sinking on the south part of the lode, on the top of the hill.

NORTH BRITISH AUSTRALASIAN COMPANY.

The following letter, from the same correspondent whose communication we inserted last week, though relating chiefly to matters of a prior date to those already given, will be found interesting, as showing the origin of the dispute with the agent of the Australasian Company—with the details of which many of the shareholders are probably yet unacquainted:—

Auckland, May 15.—In my last communication I entered fully into the subject of the copper mine at Kaw-aw, belonging to the North British Australasian Company; I now propose to give you some information in reference to the adjoining mine, the property of Mr. Heale and myself. This latter mine is situated on the south-west side of the Island of Kaw-aw, between it and the main land. On reference to a chart of New Zealand, you will find the situation of the island in respect of the district by which it is surrounded.

In the year 1845, just after the destruction of Kororarika, and when Auckland itself was threatened by the native population, an allotment of land (our property, for which 57*l.* had been paid to the local Government) was taken by them as the site of a fort for the defence of the town. In exchange for this allotment, and by way of compensation, it was arranged that we should select 27½ acres of land, belonging to the Government—27*l.* 10s. having been the upset price of the land resumed at the auction at which it was purchased. After a lengthened search for a piece of mineral land, other country land at that time selling by private individuals for about 2s. an acre, we were unable to find any more suitable than a piece adjoining the North British Australasian Company's mine at Kaw-aw; we, consequently, made our selection there, taking the boundary of the company's land as our north-east boundary, and thence extending seaward, with the intention of searching for, and working on, the continuation of the same lode. I immediately wrote to Mr. Taylor, then in Sydney, and asked, so far as compatible with the interests of the company, his furtherance of our hazardous undertaking, of sinking a shaft in the sea; but, in reply, we were threatened with overwhelming lawsuits, which, he predicted, could not fail to be both ruinous and unsuccessful; and these views were supported by the opinions of Sydney lawyers, transmitted at the same time. I freely admit he has used his best endeavours to be as good as his word. Whatever might have been our disposition at the first to yield to persuasion, we were not at all inclined to give way before threats, expressed in no very measured terms, and founded on opinions which, whether from an imperfect statement of the case, or other causes, were obviously not meeting the question at issue. Mr. Taylor has, from the commencement, treated our operations as an encroachment on his rights, though it is not so easy to see why he should have done so. Nothing was attempted to be granted to us which he already possessed; we wished for nothing that he had; we merely became his neighbours; where his land ended, there ours begins. Now, seriously to say that the grant of an island, *per se*, confers a right to work indefinitely under the adjoining sea, can only be attributed to great ignorance or wilful misstatement.

In November of the same year in which we obtained our grant (1845) a change of Governors took place. Sir George Grey succeeded Captain Fitzroy. The former, in the following August, well pleased with an opportunity of gratifying a personal hostility he had conceived, lent himself willingly to Mr. Taylor's views, and set about picking a hole in our title, on the ground that our grant had not been made strictly in conformity with the Australian Land Sales' Act. Proceedings were taken by *scire facias*, and we were ousted. We appealed to the Secretary of State, who, seeing that we had been ousted more through a technical than substantial defect, acknowledged the justice of our case, and directed a new grant to be made to us; this the Governor refused to do, without again referring the matter to England. Whilst this was pending, his Excellency, having made all the use he required of Mr. Taylor, as a pretence for annoying and dispossessing us, turned round on his ally, and by promising Mr. Heale and myself a lease of the land he had deprived us of, adroitly made use of us to cover an attack on Mr. Taylor's grant. Time has now unmasked the true character of his conduct in respect of both; equally insincere to each, his only object, it is now apparent, was to get possession of all, and then dole out what he thought fit, on his own terms. The *scire facias* case, however, to repeal the grant of the Island of Kaw-aw, was unsuccessful; and soon after this was determined, the judgment annulling the grant to Mr. Heale and myself was reversed by the Supreme Court—it having been found that the Australian Land Sales' Act had been repealed before the issuing of the *scire facias*, although that fact was not known here at the time. The result is, that after four or five years spent in litigation, and a great expense incurred, Mr. Taylor and ourselves are respectively in possession of what we originally claimed.

Our mining operations commenced in September, 1845. Every difficulty was thrown in our way by Mr. Taylor, but after both expense and trouble we succeeded in sinking a shaft in the sea, and cutting the lode at a depth of 9 fms., in May, 1846. From that time to the September following, we raised 400 tons of ore, which were sold from time to time at Swansea, between April and Oct., 1847, under the name of New Zealand. Amongst the annoyances of this period, an attempt was made to stop us by injunction; but the application failed, and Mr. Taylor was condemned in costs, though, I suppose, the expense of this mere gratification of spleen on his part fell eventually on the North British Australasian Company.

As I have already said, in September, 1846, the Governor commenced the *scire facias* proceedings, and this, of course, stopped our operations. In November a decision was given against us, and we went to England to prosecute our claim. We returned in 1848, but still harrassed by the local Government, did but little at the mine till the middle of 1849. Since then we have sunk the shaft to 14½ fms., and thence driven levels; from the 9 and 14½ fm. levels we have raised about 1200 tons of ore. The first 200 were sent to Sydney, to be shipped as dead weight in the wool ships (as was done with a great portion of the ore we raised in 1845); but the inveterate hostility of people connected with the North British Australasian Company prevented this being done, by raising fears that the ore would heat. The fact of some pounded iron pyrites, sent away in ignorance instead of copper ore from the company's mine, having heated, gave a plausibility to the reports raised, and thus parties were deterred from being willing to ship wool in the same ships with the ore. We have now chartered a ship at Sydney, to take about 400 tons to Swansea direct, and a portion of her cargo is actually 100 tons of the ore we sent up to Sydney some time since, now brought back here; the remainder has just been put on board at Kaw-aw. This ore will be sold at Swansea under the name of "*West* Kaw-aw."

As the West Kaw-aw Mine is on the same lode as the Kaw-aw, high water mark being the boundary between the two, and both working near to it, the character of both is the same; the ore is plentiful, but poor. We are now building furnaces on a small island, about three miles distant from the mines, for the purpose of running our ore to a regulus previous to shipment, and shall certainly not ship more than one other cargo, if that, in the raw state. It will I think, be clear, from what I have stated, that by far the most advantageous mode of working the two mines would be to render mutual assistance; and there cannot be a doubt that great facilities may thus be afforded, and great expense saved by both mines, which cannot pay if subjected to any extravagant outlay. The subject of a joint pumping-engine was talked over, and this has led us to consider the subject more carefully than when I last wrote. We have come to the conclusion that a 36 or 40-inch cylinder engine would be amply sufficient for both mines for the present, and would enable the lode to be examined thoroughly to a sufficient depth to ascertain its true value. The reasons in favour of an engine of this size in preference to a larger, appear to be—1. That a less expense would be incurred, though amply sufficient power obtained for the present.—2. That an engine of this size would be much more easily repaired than a larger one; in fact, it would be almost impossible here to repair to any extent an engine of very large size.—3. When the power requires to be increased, two smaller engines would be preferable to one large one, as the shallower levels might be worked under one, whilst the other was being occasionally set to rights or repaired, and thus the mine never at a standstill. If the directors of the North British Australasian Company should entertain the same views as ourselves, and should send out an engine, and at the same time give sufficient power to some proper person here to negotiate an arrangement, I doubt not that one can readily be made for working the two mines in a manner which will be most advantageous to both parties. I can only say that we, at least, shall be most happy to enter on the negotiation in a spirit of liberality and accommodation.

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

J. P. Budd, of the Ystalyfera Iron-Works, Swansea: For improvements in the manufacture of coke. Mr. Budd observes that all coals may be divided into two classes—viz.: those which, on the application of heat, run into a mass, and those which under similar circumstances splinter, and separate into small pieces without uniting. The latter class, when reduced below a certain size, are almost valueless, and the object of the present invention is to render such coals available for coking purposes, which is effected by mixing with them bituminous coal, possessing in as high a degree as possible the quality of caking, and subjecting them when so mixed to the ordinary process in use for coking bituminous coal. Both sorts are to be reduced to a state of powder by grinding in a pug mill, or the lumps are to be separated by sieves. The most refractory anthracite coal may thus (it is said) be converted into coke of a good quality. No proportions of either can be laid down as a general rule, the non-caking coals possessing this quality in different degrees; but it is recommended to mix the two sorts at first in equal quantities, and to increase or diminish the quantity of either until coke be produced, which presents on fracture a homogeneous appearance throughout.

Claim.—The coking of non-caking coals by the mixture of caking coals, the two sorts being intimately mixed together and reduced in size by grinding, rolling, or by abstraction of the lumps by sieves or other means.

J. Tucker, of the Royal Dockyard, Woolwich, Kent, shipwright: For improvements in steam boilers, and in gearing, cleansing, and propelling vessels. The improvements here specified and claimed are:—1. In the construction of boilers, the placing of the heel or shoe of the funnel on the diaphragm, and causing the funnel to pass through the smoke box, whereby the steam enters the cylinders in a drier state, and the tendency to prime is lessened.—2. A method of gearing and topping the screw propeller. The screw is attached to the shaft, clear of the dead wood of the vessel, and has a collar connected by an arm and a standard to a second shaft placed above the level of the driving shaft, which bears the weight of the screw when it is topped or raised under the counter of the vessel.—3. An arrangement of apparatus for cleansing the sides and bottoms of ships. This apparatus consists of a brush, composed of cane or whalebone, arranged on the side of an air-tight case, which is drawn backwards and forwards, or diagonally, over the sides of the ship, by means of ropes suitably disposed and guided.

E. Sharps, M.A., Lancaster: For certain improvements in railway carriages.—*Claims.*—1. A method described of constructing the framework of low carriages, as far as regards the outside beams, or sole guard-pieces, and under rails of carriage bodies, and the mode in which the same are connected and bound together to give additional strength to the framework.—2. A buffing apparatus, as described, in so far as regards the peculiar shape of the buffer head, and the combination of two buffer rods.

P. A. L. de Fontainemoreau, South-street, Finsbury: For certain improvements in oscillating engines put in motion by steam and gas resulting from combustion.—*Claims.*—1. The use, as a motive-power, of steam and gases raised to a very high temperature and in a state of dilitation, in the manner described.—2. The constructing oscillating engines composed of an annular capacity divided into compartments.—3. A peculiar mode of disposing the slide valve in oscillating engines, so as to regulate the admission of the motive power.—4. Regulating in oscillating engines, by the suction of the engine itself, the admission of atmospheric air, so as to produce the best and most possible effects.

F. A. Gatty, of Accrington, Lancaster, manufacturing chemist: For a certain process or certain processes of obtaining carbanate of soda and carbonate of potash. Mr. Gatty, in carrying out his invention, places 300 gallons of the neutral tartrate of soda or of potash (of the strength of 8° Twaddel's hydrometer) in a vessel capable of holding 400 gallons. To this he adds 34 gallons of lime milk, each gallon containing 1 lb. of lime, and less the whole in agitation, forcing in at the same time a stream of carbonic acid gas (obtained by any of the ordinary methods), until the whole is well saturated. The bi-carbonate of soda or potash thus formed is separated from the tartrate of lime, washed, and evaporated to dryness. It is then calcined, and becomes converted into a sub-carbonate sufficiently pure for most manufacturing purposes. The tartrate of lime, when well washed, will be in a fit state to be employed in the manufacture of tartaric acid, and the liquor obtained by the first washing is to be evaporated and treated as above described, in order to obtain the bi-carbonate of soda or potash contained in it. Instead of lime, carbonate of lime, or a mixture of carbonate of lime and lime may be employed; but Mr. Gatty considers lime alone to be preferable.

Claim.—Obtaining carbonate of potash or carbonate of soda by decomposing a solution of neutral tartrate of potash, or of the neutral tartrate of soda, with carbonic acid gas and lime, or with carbonic acid gas and carbonate of lime, or with carbonic acid gas and a mixture of lime and carbonate of lime, as above described.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

C. Cowper, of Southampton-buildings, Chancery-lane, patent agent, for improvements in the manufacture of tiles.

D. Auld, of Glasgow, engineer, for certain improvements in steam-engines, and in the working of steam-boilers or generators, and in apparatus connected therewith.

S. Botturi, of No. 7, Place de la Bourse, Paris, civil engineer, for certain improvements in machinery and apparatus for elevating fluids, and in their application as a motive-power.

G. H. Bachhoffner, of Grove-road, St. John's Wood, Middlesex, and N. Defries, of Grafton-street, Fitzroy-square, civil engineer, for improvements in obtaining light and heat, and in apparatus connected therewith.

E. d'Orville, of Manchester, merchant, and J. Partington, of Wichen Hall, near Rochdale, in the same county, bleacher, for certain improvements in finishing thread or yarn.

H. M. Ommanney, Esq., of Chester, for improvements in the manufacture of steel.

J. G. Taylor, of Great St. Thomas Apostle, London, merchant, for improvements in the manufacture of dress and other pins, and other dress fastenings and ornaments.

W. H. Green, Basinghall-street, London, gentlemen, for improvements in the preparation of peat and other ligneous and carbonaceous substances, and in the conversion of some of the products derived thereby, and in the mode of their application to the preservation of substances liable to decomposition and destructive agencies, and which mode is also applicable to other products of a similar nature.

P. Nind, of Leicester-square, gentleman, for improvements in the manufacture of sugar, and in cutting and rasping vegetable substances.

J. H. Pape, of Paris, for improvements in musical instruments.

W. H. Gossage, of Stoke Prior, Worcester, chemist, for improvements in the concentration of sulphuric acid, and certain other fluids; also in the use of a certain product or certain products sometimes obtained in manufacturing sulphuric acid and sulphurets.

A. O. Harris, of High Holborn, philosophical instrument maker, for improvements in barometers.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

G. Turton, Wolverhampton, flooring cramp.
Walker Brothers, White Lion-street, utrolibet carriage.
F. C. Penrose, and G. F. Bennett, Trafalgar-square, sliding helicograph.
R. and J. Rankin, Liverpool, parts of machinery for cleansing grain or seeds.
A. Dimoline, Bristol, compensation pianoforte mechanism.
L. Brierley, Birmingham; and T. Beech, Shelton; vertical revolving disc signal lamp.
T. De La Rue and Co., Bunhill-row, edges of envelopes.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Holywell 15 6—North Percy Hartley 14 3—Tanfield Moor Butes 13 3—Townley 14—West Wylam 13 6—Wylam 15 3—Wall's-End Elm Eark 15 9—Harton 15 3—Hilda 15—Lawson 15 3—Riddell 15 3—Bell 16—Belmont 15 9—Braddyll 16 6—Hetton 17—Haswell 17—Kepier Grange 17—Lambton 16 6—Lumley 15 9—Richmund 16—Russell's Hetton 16 6—Stewart's 17—Whitwell 15 6—Caradoc 16 3—Heseldon 15 3—Heugh Hall 15 9—Kelloe 16 3—South Hartlepool 16 3—Whitworth 14 3—Adelaide Tees 16 3—Seymour Tees 15 3—Tees 17—Sydney's Hartley 14 9—Birchgrove Graigola 19 6—Whitworth Coke 21—Cowpen Hartley 14 9—Llangennech 20—Derwentwater Hartley 14 9—Hartley 13 9.—Ships at market, 88; sold, 78.

WEDNESDAY.—Holywell 15 6—Howard's West Hartley Netherton 14 9—Walker Primrose 15—West Hartley 15 6—Wylam 15 3—Wall's-End Bewicke and Co 15 9—Hedley 15 6—South Eden 15 6—Eden Main 15 9—Belmont 15 9—Braddyll 16 6—Hetton 17—Haswell 17—Kepier 16 3—Lambton 16 6—Pemberton 15 - Richmund 16—Russell's Hetton 16 6—Scarborough 15 9—Stewart's 17—Caradoc 16 3—Heugh Hall 16—Kelloe 16 6—South Hartlepool 16 6—Thornley 16—Whitworth 14 3—Clavering Tees 14 6—South Durham 15 9—Vernon Tees 15 6—Sydney's Hartley 14 9—Cowpen Hartley 14 9—Derwentwater Hartley 14 9—Hartley 13 9.—Ships at market, 63; sold, 54.

FRIDAY.—Bate's West Hartley 14—Buddle's West Hartley 14 6—Carr's Hartley 14 6—Chester Main 14 3—Clavering's New Tanfield 13 3—Davison's West Hartley 14 6—East Adair's Main 12 9—Hartlepool West Hartley 14 6—Holywell 15 6—West Hartley Netherton 14 9—North Percy Hartley 14—Ord's Main 14 6—Ravensworth West Hartley 14 3—South Peareth 13—Tanfield Moor 13 6—Tanfield Moor Bute's 13 3—Townley 14 Walker Primrose 13—West Hartley 14 6—Wylam 15—Wall's-End Acorn Close 15 6—Brown 14 9—Bewicke and Co. 15 9—Bell and Brown 15 6—Gosforth 15 6—Hotspur 14 9—Heaton 15 6—Hilda 15—Lawson 15—Morrison 15 6—Northumberland 14 9—Original Gibson 15—Riddell 15 3—Walker 15—Eden Main 15 9—Lambton Primrose 16—Bell 16—Belmont 16—Braddyll 16 9—Hetton 17—Haswell 17 3—Jonassohn 14 6—Kepier Grange 16 3—Lambton 16 6—Lumley 15 9—North Hetton Lyons 16—Richmund 16 3—Russell's Hetton 16 6—Scarborough 15 9—Stewart's 17—Whitwell 15 6—Howdon 15 9—Caradoc 16 3—Cassop 16 3—Heselden 15 6—Hartlepool 16 9—Heugh Hall 16—Kelloe 16 9—South Hartlepool 16 6—South Kelloe 16—Thornley 15 9—West Kelloe 15 6—West Hartlepool 16 3—Whitworth 13 9—Adelaide Tees 16 3—Cleveland Tees 15—Maclean's Tees 15—Pease's West 13 6—Seymour Tees 15 3—South Durham 15 9—Vernon's Tees 15 3—Cowpen Hartley 14 9—Derwentwater Hartley 14 9—Hartley 13 9—Snapethorpe 15—Tanfield Coke 22.—Ships at market, 506; sold, 323.

Delivery of coals, &c., in the port of London during the month of November:—

	Ships.	Tons.
Newcastle	473	153,669
Sunderland	374	106,243
Stockton, Middlesbro', &c.	318	83,843
Blyth	55	12,627
Scotch	4	755
Welsh	22	6,516
Yorkshire, &c.	24	1,809
Small coal	3	333
Culm	1	260
Cinders	6	415
Total imported in November, 1850	1280	366,470
Total imported in November, 1849		280,290
Increase		86,180

Inland coals brought by canal, in the month of Oct., 1850, upon which the City's and other dues were received ..... *Tons* 2044½

Inland coals brought by railway, the City's and other dues upon which were paid into the Chamber in the month of November, 1850 ..... 446½

Comparative Statement of 1849 and 1850.

Imported from January 1 to November 30, 1850	*Ships* 11,405	3,196,737	*tons.*
Imported from January 1 to November 30, 1849	„ 10,855	2,980,396	„
Increase in the present year	„ 550	216,341	„

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Dec. 14, was—No. of passengers, 17,301.—Amount of money, £72 1s. 9d.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—There is no change to notice in the 80 fathom level, east of Field's engine-shaft, since the last report. The stopes, west of No. 1 winze, are suspended until this winze is communicated to the 80 fm. level; the lode here is looking well. The lode in No. 2 winze, sinking under the 70 fm. level, east of the engine-shaft, is from 4 to 5 ft. wide, worth 80*l.* per fm. The lode in the 70 fm. level, east of said shaft, is about 6 ft. wide, worth for copper ore from 100*l.* to 120*l.* per fm. The lode in the winze sinking under the 60 fm. level, west of Wyld's shaft, is about 11 ft. wide, worth for copper ore quite 150*l.* per fm.—this winze is 5 fms. east of the 70 fm. level end. The lode in the 60 fm. level east is from 3 to 4 ft. wide, containing mundic, copper ore, and spar—the indications here are more favourable than in any other level at this distance east of the engine-shaft. We expect Wyld's shaft will be communicated to the 60 fm. level this present working month. Our shaftmen are preparing to fix the plunger-lift in the 70 fm. level.

BARRISTOWN.—The ground in the cross-cut is much the same as last reported—favourable for driving, with indications of promise, such as gossan heads, veins of spar, and spots of lead interspersed throughout the end, and a little water issuing from the same, which indicates the approximation of a branch or lode. The lode in the end east is 9 in. wide, being chiefly composed of gossan and spar, with occasional good stones of lead. The ground in this end is very favourable for exploring.

BEDFORD UNITED.—The lode in the 115 fathom level, east of Andrew's winze, is 3 ft. wide, producing good stones of ore, and very promising; we are driving by the side of the lode in this level west. In the 103 fm. level east the lode maintains its character for productiveness, being now, as for the past two months, worth 10 tons of ore per fm. The lode in the 90 fm. level east is without alteration; in Arscott's winze in this level, the lode is 3½ ft. wide, and will produce 8 tons of ore per fm. All the other parts of the mine present nothing new.

BRYN-ARIAN.—The lode in the 10 fm. level, driving west, is 6 ft. wide, with several small bunches of ore, but not of much value at present; the stope in the back of this level is improved since last reported; we are now through the slide, and it will yield about 10 cwts. of ore per fm. The lode in the winze sinking under the deep adit level west is 5 ft. wide, with small branches of ore; the stope in the back of this level still continues to yield about 15 cwts. of ore per fm. The bob-plat in the adit level is nearly completed, and we are daily expecting the pumps; but, as they are coming by vessel from Tavistock, we do not know exactly when they will arrive. The carpenters are getting on very well with the building of the wheel at Pensarn, and the masons with the pit. We have about 28 tons of ore at surface, 20 tons of which is clean.

BUTTERDON.—The engine-shaft is sunk 23 fms. from surface, good ground for sinking—it requires timber to secure it; the character of ground at present is of a soft elvan strata, it much resembles the patches of elvan in Trelawny and Trehane Mines. The branch which has been yielding stones of ore for several fathoms in sinking is carried out of the shaft by its underlay towards the lode—we are progressing very favourably. The engine continues to work well.

CALLINGTON.—The lode in the 125 fm. level north is 12 inches wide, producing saving work, and opening ground that will set at a moderate tribute. The lode in the south end in this level is 8 in. wide, composed of soft spar, prian, and stones of lead, also laying open ground that will leave a profit to the shareholders when wrought on. The ground in the diagonal shaft, sinking below the 125 fm. level, is favourable, and the stratum congenial for lead; and, judging from the underlie of the lode, it will be intersected within 2 fms. sinking, after which we shall sink on its course, and be daily laying open the lode, instead of exploring the country for lead ground, in the shape of long cross-cuts and a hard shaft. The lode in the 112 fm. level south is 12 in. wide, producing a small quantity of lead, but with every appearance of a speedy improvement. The ground in the counting-house shaft is very favourable, and it is being pushed on as fast as possible to reach the lode about the 112 fm. level; when communicated to that level, great facilities will be afforded for working the mine, by way of ventilation, drawing away the stuff, &c. The lode in the 112 fm. level, north from the south engine-shaft, is 14 in. wide, and will produce, throughout, 4 cwts. of lead per fm., and will more than equal that in the bottom of the level for many fms., which circumstance should induce you to resume the driving of the 125 fm. level under it, of which more will be said by and bye. The Kelly Bray lode, in the rise above the 70 fm. level, is 5 ft. wide, composed of beautiful spar, mundic, and strong yellow copper ore, producing all of 3 tons of the latter per fm., and improving from the back of the level upwards, as the reports will show; the last 39 fms. driven has been through a productive lode, and one that will well pay for being wrought; but it is properly locked up previous to a communication being made to the shaft. In the latter, no lode has been seen for the last 20 fms. sinking, and I would again advise that the same be intersected before sinking the shaft any deeper, for I am fully persuaded that it will be found to the north of the shaft, perhaps some fms.; since the 19th of October a plat has been cut, which discovered a branch, or dropper, 12 in. wide, composed of spar, mundic, and rich yellow copper ore, dipping north 3 ft. in a fm. towards the lode. This dropper, in addition to several smaller ones, will produce about 2 tons of ore per fm., and I have no doubt but that a course of ore will be met with when it forms a junction with the lode, which will be our guide in the further sinking of the shaft, &c., and at about one-half of the expense that it now costs. Also, the 80 fm. level east, on Kelly Bray lode, should be resumed forthwith, to come under the productive lode in the 70, and, after the shaft is holed, to push on these levels eastward into the granite, as well as to intersect a cross-course which is said to be in that direction. I may add that I have carefully surveyed the above mine, on the lead lode as well as the east and west copper lodes, on which the works are very partial, and some of them have lain dormant for several years, but which should now be resumed, and that without delay. The general appearance of these lodes, especially the Kelly Bray and Johnson's, will warrant the necessary outlay for their full development, for I think I am safe in saying that two more promising lodes I never saw in one mine, to say nothing of Vivian's and the great south lodes, &c., when we consider their composition, direction, and underlie—in a congenial clay-slate stratum, at the base of a beautiful granite hill; also, the surface appearance is such as any one could wish for, if notice may be taken where lodes have proved productive in similar situations, besides the facilities that are afforded for proving these lodes to the fullest extent, and at a very considerable depth, without any additional steam-power or establishment, and very little beyond manual labour, seeing they are so very comeatable to the shafts, &c., and the ground standing without being timbered. In addition to the present work, I would suggest that the 125 fm. level, north from the south shaft, be driven by six men, and the 112 fm. level, north from the north mine, by four men, for I have many times thought there is an east and west lode to be cut not far ahead from the end, judging from the great quantity of water issuing from it; also, the 112 fm. level east on Johnson's lode, and, as I have before intimated, to drive the 80 east on Kelly Bray lode; also, when the lode is cut by a cross-cut north of Kelly Bray shaft, 12 men should be employed instead of 9, and the pare in the rise be increased to 8 men, to hole as quickly as possible, for it is my full and firm conviction that, if these lodes are fully developed, she will make a lasting and profitable mine; in the interim, we will raise all the mineral we can fairly, towards meeting the cost until the mine is laid open, after which I have no doubt of the favourable results.

CONDURROW.—In my report, dated 21st October, I intimated that with the quantity of water we usually get in the months of November and December, we should be able to return sufficient tin, with the copper, to liquidate the debt on the book at this account—this, I grieve to say, has not been effected by a considerable amount; owing, I grant, to other causes besides a great slackness of water (which is the main cause); the additional appliances to our new erections, and an increase of tutwork, have made our cost unusually heavy—in fact, the heaviest two months cost we have ever had. We continue to carry on very spirited tutwork operations—viz.:—sinking three shafts, Pryce's under the 90, Hope's under the 70, Woolf's under the 40. Driving the 90, west of Pryce's, on the main lode. Cross-cut in the 90, north-east of Pryce's; ditto 80, west of ditto, on Roberts's lode; ditto 80, east of ditto, on ditto lode; winze sinking under the 80, west on ditto lode. The 80 cross-cut, driving north-east of Pryce's, north of Roberts's lode; ditto, driving north-west of Pryce's. The 70, driving east of Hope's shaft; 60, driving east of ditto; 50, driving east of ditto; 50, driving east on Llandower lode; 40, driving east on ditto. Cross-cut, driving north, on cross-course, east of Woolf's, in the 20; 30, east of Woolf's shaft. Cross-cut driving north in the 10, at Llandower; eastern adit end, driving east; shallow adit end, driving east. I have no very interesting points to remark upon in either of these shafts or levels, with the exception of the 90 west, where we have a good course of tin, and probably a continuation of the rich course we have had in the 80, and the 50 west on Roberts's lode, where the lode is large, nearly 5 ft. wide, and upon the whole very productive of tin. The 80 east, on the same lode, is productive of tin and copper, but not a rich end. We are working tribute ground at and above the adit, in the 10, 30, 40, 50, 60, and 70 for copper ore; and at the 60, 70 and 80 for tin and copper.

EAST BALLESWIDDEN.—The level to take away the water from the wheel-pit is completed; it is nearly 150 fms. in length, and one of the best to the west of Penzance. The carpenters are working with all possible speed to get the wheel completed, and we shall at once commence to get the water course home to the wheel.

EAST POOL.—In the 120 fathom level we have just cut through the cross-course, the lode is 2 feet wide, containing good stones of copper ore, but have not seen enough of it to speak of its value. In the 110 fm. level, west of cross-course, the lode is 3 ft. wide, with stones of copper. We have 25 fms. further to drive to get under the ore ground in the 100 fm. level; in the 100 fm. level, west of cross-course, the lode is 2 feet wide, worth 10*l.* per fm. In the 90 fm. level we are driving east and west on the north part of the lode—it is 3 ft. wide in the west end, worth 14*l.* per fm., and in the east end it is 2½ ft. wide, worth 10*l.* per fm. The lode in the 80 fm. level, west of cross-course, is 2 feet wide, worth 10*l.* per fm. The stopes in the bottom of the 90 fm. level are worth 14*l.* per fm. The rise in the back of the 80 fm. level is worth 14*l.* per fm. The lode in the rise in the back of the 36 fathom level, on the north lode, is 3 feet wide, containing stones of copper ore. In the rise in the back of the 100 fm. level, on the North Tincroft lode, the lode is large, containing stones of copper ore. We are driving at the 70, on the cross-course, to cut the North Tincroft lode—the cross-course is large, containing stones of copper ore. We are expecting daily to cut the lode. Our tribute department has improved during the two months.

EAST SHARP TOR.—The lode in Hitchins's shaft is still very hard, but, nevertheless, kindly, producing large quantities of strong capels, less peach, more spar, mundic, and occasionally good spots of yellow copper ore.

EAST WHEAL JOSIAH.—The lode in the adit end south is improved in size, and is about 2½ ft. wide, composed principally of flookan, mundic, spar, and spots of copper ore, with a very pretty white killas foot wall, stained with greens, from which I am of opinion that we are getting near the intersection of the copper lode.

EAST WHEAL LEISURE.—The new lode in the adit level keeps its size and character both east and west. It has been opened upon 4 fms. The east end turns out as much as ever—about 5 tons per fm. The west end has rather more jack in it, but of a very kindly character.

EAST WHEAL REETH.—According to your request, Capt. Treweek and I went down to inspect the mine this morning, and found it to be as good, if not better, than we had anticipated. We broke some fine stones of tin from Wheal Glory bottoms; and we intend to put six men there at once, and begin to break away the lode. Since sinking the above, we have set the bottoms to six men to raise 100 bushels of tinwork for 12*l.*, by the advice of Capt. Treweek, to be brought to the surface. We shall soon be in a position to ascertain the value of Wheal Glory bottoms in every foot we sink. I will send you a stone of tin on Tuesday next. We have broken stones all over the bottoms to-day; and I am quite satisfied there is a good lode in that place. The report of Capt. Treweek, purser of Wheal Margaret, is as follows:—"I visited East Wheal Reeth to-day, and found the water taken out of the 10 fathom level, where the ancients advanced north several fathoms towards Wheal Glory old bottoms; and the distance to reach that point is about 8 or 10 fms. more. The lode in Wheal Glory bottoms, which is about 3 fathoms below the adit, is large for several fathoms in length, containing a good sprinkling of tin, and found equally as promising as was originally anticipated. In order to relieve this place of water with which it is encumbered, and to work it more advantageously, the 10 fm. level should be hastened towards the productive point; and as report speaks equally favourably of a valuable lode being left at or about the 20 fm. level, where the shaft, which is perpendicular, is represented as meeting the lode, in conjunction with its underlay, this is an object apparently of importance. In the 10 fm. level the former workers have drifted about in different directions—one of which, I believe, was mined for intersecting the Wheal Reeth lodes south; an object of importance, I consider, far exceeding any other. The commencement to examine the workings of this mine, preparatory to a more extended investigation, is, in my opinion, well chosen; and, in order to enable one to judge more correctly as to future proceedings, the different levels in this spot, as well as all others, should be dialled and laid down with exactness, also the range, as near as can be ascertained, of Wheal Reeth lodes through the sett, as a guide to that which may be deemed advisable to be done hereafter."

EAST WHEAL RUSSELL.—The following report has been received from Capt. R. Dunstan, of the West Caradon Mine, dated December 12:—"Having heard such conflicting reports of this concern, and having to pass that way on the 2d inst., I was induced to call at the mine, to see it for myself, and having done so, I beg most cheerfully to assure you that I feel perfectly satisfied, and, indeed, pleasantly disappointed with the prospect there presented to my view; but, as my visit to the mine was by mere accident, of course my survey was confined to the lode in the shaft, the bottom of which at that time was about 7 fms. below surface. I found the lode to be very large, I should think upwards of 20 ft. wide, composed of a beautiful gossan, quartz, and soft prian, possessing extraordinary appearances and prospects of the most inviting character; and, whatever the sequel may be, the surface indications are such as are seldom surpassed."

—The following report was received from Capt. James Richards, of the Devon Great Consols, dated November 23:—"On my way to-day to the quays I called in to see East Wheal Russell, and although there has not been much done since my former visit on the lode, I beg once more to hand you a few lines on this magnificent looking concern. The lode from the south wall, and so far as cut into in the cross-cut driving north of the shaft, now in course of sinking, is at least 35 ft. wide, composed for the most part of gossan of the finest description, carrying, however, in places, a beautiful light capel and prian, and is, evidently, although at no greater depth, impregnated with copper. The underlay also being so little, 1 ft. only to the fathom, is of very great importance. I also examined the country both to the north and south of the lode, which I found to be precisely similar to that of the Devon Great Consols. I have always observed on our finding on the back of the Wheal Maria lode what is to be seen in East Wheal Russell, to be sure indications of a course of ore at no great depth."

ESGAIR LLEE.—In my last I informed you we were going to suspend the deep adit east of Owen's winze, on the north part of the caunter lode, and put the men to open in this level on the caunter, east of Morgan's winze; this we have been doing, and find the ground near the clay to be much disordered and soft, but on Saturday the strata had the appearance of becoming a little more settled, with some ore in the lode, but not sufficient to set a value on. During the past week we have, in the 12 fm. level, been opening on the south part of the caunter lode east of Morgan's winze, on the back of the level; the orey part of the lode is 1 foot wide, but from the back to the bottom of the level the lode is poor; the lode alluded to in my last, north of the stopes in the back of the 12 fm. level, west of Morgan's winze, we find in further taking down to produce patches or small bunches of ore only, but in rising the south lode is rather improved. The other stopes are much as usual, producing about ½ ton of ore per fm. As yet we have not been able to get a vessel to take the 25 tons of ore sold to Mr. Thomas Somers.

HEIGNSTON DOWN CONSOLS.—The lode in the winze sinking below the 45 fm. level is 4 ft. wide, 2 ft. of which is good saving work for copper ore. The lode in the 45 fm. level, east of Doidge's winze, is 5 ft. wide, interspersed with yellow copper ore. The lode in the 35 fm. level is from 4 to 5 ft. wide, producing occasional splendid stones of grey and yellow copper ore; the ground in the cross-cut south is being spotted with yellow ore. The lode in Hitchens's shaft, sinking below the 35 fm. level, is 4 ft. wide, producing occasional stones of copper ore. The lode in the 35 fm. level, west of Hitchens's shaft, is from 3 to 4 ft. wide, and very kindly.

HENNOCK.—We have cut into the lode 10 feet, and no sign of the footwall as yet; the lode is hard, but still showing an improvement from the 10 fm. level, and producing some good stones of lead. We have commenced driving from the winze by the side of the lode, and shall drive 5 fms., and cut in where we have no doubt we shall have the shoot of ore gone down in the bottom of the 10 fm. level.

HOLMBUSH.—The ground in the engine-shaft, sinking below the 120 fm. level, is much the same as when last reported. The lode in the 132 fm. level, west of the diagonal shaft, is 2 ft. wide, producing 4 tons of copper ore per fm.—it never looked better; the lode in the stopes in the back of this level will produce 3½ tons of ore per fathom; the ground in the south cross-cut, in this level, is favourable, the same remarks will apply to the ground in the north cross-cut. The flap-jack lode, in the rise above the 120 fm. level, is 12 in. wide, producing stones of copper ore. The lode in the 120 fm. level south is 8 ft. wide, composed of quartz and stones of lead; the flap-jack lode, in the 120 fm. level, east of the great cross-course, is 16 in. wide, composed of spar, mundic, and stones of copper ore. The flap-jack lode, in the 100 fm. level, east of the great cross-course, is 5 ft. wide, producing 5 tons of copper ore per fm.; the lode in the winze sinking below this level, close to the cross-course, is 18 in. wide, producing stones of ore; the ground in it is favourable, and we hope to make the communication this month; the pitches in the back of this level are producing a fair quantity of ore.

KIRKCUDBRIGHTSHIRE.—The lode in the 74 end, west of Stewart's, is 2 ft. wide, yielding 7 cwts. of lead ore per fm. The lode in the 62 end, west of Keith's, is 3 ft. wide, with spots of ore. Gilpin's shaft is now down to the 62 fm. level, and the men are putting in a sollar to commence driving east and west. The lode in the 50 end, west of ditto, is 4 ft. wide, with good stones of ore coming in. The lode is large in the 40 end, west of ditto, and with fine stones of ore through it. The 30 end men have been clearing their stuff and opening their level since they holed. We have shipped off a cargo of lead ore again this week.

LEWIS.—Our sump-whim shaft is completed to the 90 fm. level; we shall now commence driving south to cut the south lode, Cock's lode, and the new lode; at the same time we shall drive east on the north lode. I mentioned in my last report of having cut the south lode in the 80 fm. level, south from copper ore shaft; we are continuing this cross-cut south to intersect the other lodes; the north lode in the 80 fathom level, east of copper ore shaft, is 2 ft. wide, composed of mundic, brent, and a small quantity of tin. The new lode in the 70, east from tin shaft, is 4 in. wide, producing stones of tin; the new lode in this level, west from copper ore shaft, is 9 in. wide, worth 3*l.* per fm. In the 60, east from copper ore shaft, there is no alteration since last reported. Cock's lode in the 50, east from copper ore shaft, is 5 in. wide, unproductive; the new lode in the 50, west from sump-shaft, is 1 ft. wide, worth 3*l.* per fm. The new lode in the 40, east of tin shaft, is 6 in. wide, worth 4*l.* per fm.; ditto west of copper ore shaft the lode is 1 ft. wide, producing stones of tin; the south lode east of copper ore shaft, in this level, is 10 inches wide, worth 2*l.* per fm. The new lode in the 30 fm. level, west of copper ore shaft, is 9 in. wide, worth 4*l.* per fm.; ditto east of tin shaft the lode is 6 in. wide, producing a small quantity of tin. The new lode in the 20, west of copper ore shaft, is 14 in. wide, worth 3*l.* per fm.; ditto east the lode is 6 in. wide, unproductive; Cock's lode in this level, east of copper ore shaft, is 9 in. wide, worth 4*l.* per fm.

LLWYNMALEES.—The stopes from 5 to 11 fathoms west of western winze are now looking poor, having got up to the soil, or nearly so. The stopes from 11 to 17 fms. west of western winze are improving, and never looked better than to-day. The water will be out of the 14 fm. level by Monday morning, and out of the London shaft by Wednesday morning next. I have obtained the new roller shells for crushing mill, which have been put in their places, and are now in full work. The dressers are also in full force, and by the end of the next fortnight we shall have 20 tons of ore ready to sample.

NORTH BASSET.—The various lodes at this mine, and more especially those in the 52, 62, and 72 fm. levels, are still very productive. The lode recently cut in the 82 fm. level is 5 ft. wide, a beautiful lode of grey and yellow ore, and the prospects of the mine throughout are such as to leave no doubt of realising great and lasting profits.

PENZANCE CONSOLS.—We have a very great and decided improvement in this mine, more so than could be reasonably expected in so short a time; in fact, all the lodes throughout are making themselves more regular, with a beautiful and gradual underlay. The north lode we have traced for nearly 18 fms. in length, which contains tin throughout, but 12 fms. of it is very good for tin, I should say, on an average, worth from 10*l.* to 12*l.* per fm. We have also a very good course of tin on the south lode. We are increasing the number of men almost daily, and, from the appearances of the lodes and the ground already opened, there is every probability of this mine still becoming a lasting and profitable concern.

PETER TAVY AND MARY TAVY.—A new term, for 21 years, has been granted by the lords, at 1-15th dues. She is already making saving work, and we trust shortly will vie with her neighbour, Wheal Friendship.

SOUTH WHEAL TRELAWNY.—We continue to drive south on the branch we cut in the eastern cross-cut as last reported, and are in about 5 fms.; it is increasing in size as we get on, composed of killas, spar, and mundic, with particles of lead, and from present appearances I anticipate an improvement as we get from the slide in a more settled stratum; the ground is favourable. We have a little increase of water of late, which we may reasonably expect at this season.

TAMAR SILVER-LEAD.—In the 205 end, south of the engine-shaft, the lode is 2½ ft. wide—1 ft. of which is rich work. In the 190 end there has been no lode taken down since last reported on. In the 175 end the lode is 3 ft. wide, carrying a rich leader of ore, about 6 in. wide; the remaining part is good stamps' work. In the 160 end the lode is 4 ft. wide, composed of flookan, spar, and good stones of ore. In the 145 end the lode is 18 inches wide, and producing work of a good quality. In the 160 end, driving south from Spurgin's shaft, the lode is 6 fm. wide, rich work; in the same level driving north the lode is 2 ft. wide, interspersed with ore, and yielding work of a promising character. At the north mine, in the 90 fathom level, we have intersected several small branches; but we expect the main part of the lode is still further west. In the 80 end driving north the lode is 2 ft. wide, composed of fluor and spar, and occasionally producing good stones of ore. In the winze sinking in the bottom of the 70 fathom level the lode is 2½ ft. wide, and opening ground that will set at a moderate tribute. Our last parcel of ore, computed 86 tons, was sold to the Tamar Smelting Company, at 20*l.* 2*s.* 6*d.* per ton.

TINCROFT.—On Highburrow tin lode the engine-shaft is sinking below the 152; the lode is 5 ft. wide, worth 15*l.* per fm.; in the 152 fm. level east the lode is 6 ft. wide, worth 18*l.* per fm. In the 142 fm. level, east of Martin's east shaft, the lode is 5 ft. wide, worth 20*l.* per fathom for tin and copper. The lode in the 132 east has improved since last report, now worth 30*l.* per fm.; in the winze sinking below this level the lode is 5 ft. wide, worth 16*l.* per fm. In the 120 fm. level driving west of the engine-shaft, on Chappin's lode, the lode is 4 ft. wide, worth 15*l.* per fm. for tin and copper. In the 110 fm. level, driving east of Cook's Kitchen, the lode is 4 ft. wide, unproductive. In the winze sinking below the 100, west of downright shaft, the lode is 5 ft. wide, worth 6*l.* per fm. for tin and copper; in the winze sinking below the 100 east the lode is 3 ft. wide, worth 5*l.* per fathom for tin. In the winze sinking below the 90 west the lode is 7 ft. wide, worth 20*l.* per fm. for copper. Grout's lode, in the 80 fm. level west, is 8 ft. wide, worth 50*l.* per fm. for copper. In the 70 west the lode is 7 ft. wide, worth 40*l.* per fathom for copper. At North Tincroft, the lode in the engine-shaft, sinking below the 110 fm. level, is 5 ft. wide, worth 12*l.* per fm. for copper; in the 110 fm. level east the lode is 4 ft. wide, worth 7*l.* per fm. for copper; in the 110 west, in the same level, the lode is 5 ft. wide, worth 20*l.* per fm. for copper. In the 100 fm. level, east of Willoughby's shaft, the lode is 3 ft. wide, worth 8*l.* per fm. for tin and copper; in the 100 fm. level, west of the engine-shaft, the lode is 5 ft. wide, worth 15*l.* per fm. for copper. In the 90 fm. level, east of Willoughby's shaft, the lode is 4 ft. wide, worth 8*l.* per fm. for tin and copper; in the 90, west of the engine-shaft, the lode is 2½ ft. wide, worth 10*l.* per fm. for copper; in the winze sinking below this level the lode is 5 ft. wide, worth 15*l.* per fm. At Palmer's, sinking below the 100 fm. level, on East Pool lode, the lode is 3 ft. wide, with good stones of copper ore.

TRELAWNY.—At Phillips's shaft, in the 62 end north, the lode is 2½ feet wide, worth 7*l.* per fm. Trelawny's shaft has been sunk but little since last report, but the water is now out, and it is in regular course of sinking again. In the 92 end north the lode is 3 ft. wide, worth 10*l.* per fm.; in the south end, in the same level, the lode is 3½ ft. wide, worth 10*l.* per fm. In the 82 end north the lode is 3½ ft. wide, worth 8*l.* per fm. The lode in the winze, in the bottom of ditto, is 3 ft. wide, worth 13*l.* per fm. In the 72 end north the lode is 2½ ft. wide, worth 7*l.* per fm. At the north mine, Smith's shaft has not been sunk, in consequence of cutting down so much water, referred to last week, and the levels in the 55 north and south have been idle from the same cause; but.

if matters go on as at present, we hope to get the men to work by the 15th. In the 40 north we have a lode about 1 ft. wide, but poor. Our stopes are much the same as usual. We sampled on Friday last 100 tons of crop ore; we did not sample the No. 2 ores, but purpose sampling a larger parcel than usual of this sort next time.

TRELEIGH CONSOLS.—Christoe Lode: In the 90 fm. level the lode is 2 ft. wide, worth 5*l.* per fm.; the winze below the 90 fm. level is holed to the 100 fm. level. The men will drive the 100 fm. level, west of Garden's, next week. In the stopes above the 90 fm. level, west of Harries's winze, the lode is 20 in. wide, worth 8*l.* per fm. In the 90 fm. level, west of cross-cut, on the north part, the lode is 20 in. wide, not much ore. In the 70 fm. level, west of Garden's, the lode is 2 ft. wide, with stones of ore.—Parent lode: At the Parent engine-shaft, below the 52 fm. level, we are sinking in the country, south of Parent lode and north of the middle lode. In the rise above the 40 fm. level, east of Parent engine-shaft, the lode is 2 ft. wide, worth 3*l.* per fm. In the 30 fm. level, east of ditto, the lode is 20 in. wide, with stones of ore.—Middle lode: In the 40 fm. level, east of cross-cut, the lode is 18 in. wide, with good stones of ore. In the 40 fm. level, west of ditto, the lode is 1 ft. wide, with stones of ore. In Burgess's shaft, from surface, we are sinking in the country for the middle lode.

TRELYON CONSOLS.—This mine continues to be in a very healthy condition. We have doubled our returns this month, and fully expect to treble them next month. The Wheal Venture lode, in the western end of the 32 fm. level, or 44 fms. from surface, is fully equal to what it was last week, when it was said to be worth 30*l.* to 40*l.* per fm., and containing rich stones of tin, worth from 6*l.* to 7*l.* per barrow; we are sinking the shaft upon this lode, and find it quite as good as we go down, the lode being about 16 in. wide, part of it tin, and part copper, running side by side. Wheal Margery lode is about 3 ft. wide, producing rich stones of grey ore, some of which have been assayed, and found to contain 34 per cent. for copper. In the back of the 60 fm. or sos level we have men on tribute, producing some tons of grey and yellow ore per month; we expect to cut this course of ore in the 30 fm. level, by driving 2 or 3 fms. About 60 fms. west, or, perhaps, much less, is the junction of granite and killas, where we expect a large quantity of mineral produce; at this depth, on this lode, we have no water charge, it being at the sea level. On the Wheal Venture lode we have a horse-engine drawing the water, at a charge of 5*l.* 5*s.* per month. We have driven north from this lode towards Wheal Margery lode about 20 fms., where we are daily looking for another lode, which has been worked upon at surface, and found very productive; we shall then have three mineral lodes within about 100 fms.

WARLEGGAN CONSOLS.—Our operations for the last month have been as follows:—The north cross-cut is extended from Michell's shaft 5 fms. 6 in.; the ground is moderate—set at 3*l.* 10*s.* per fm. In the south cross-cut we have holed to the adit on the course of the south part of the lode. Four men are now employed in clearing eastward to trial shaft, and hitherto we have had 4 men stoping the backs. We have holed in several places to the old men's workings; where the whole ground remains in the bottom of the adit we can see a good lode, and we hope shortly to report on the lode we passed through in sinking Michell's shaft.

WEST BASSET.—A beautiful course of ore has been cut in the 50 fathom level, on the south lode, east of the cross-course, now 3 ft. wide, all fit for the pile, and in a granite country; in the same level, on the engine lode, the lode is 3 ft. wide, of grey and yellow ore. In the 20 fm. level the lode is 2 ft. wide, a beautiful gossan, mixed with grey and yellow ore. In the 40 fm. level, on the south lode, the lode is 3 ft. wide, of yellow ore. All the levels are improving every foot, and the mine bids fair to rival the North Basset, and all other important mines in that locality.

WEST ESGAIR LLEE.—The lode in the adit level, east of the new road, is without alteration since my last, looking promising, and producing some good stones of ore. We are getting on with the dressing as well as the weather will admit of.

WEST GOGINAN.—I see no particular alteration in this mine since my last; the lodes in each end are looking very promising, composed of jack, gossan, spar, and spots of lead ore.

WEST WHEAL JEWEL.—No lode has been taken down in the past week in any part of the mine on Wheal Jewel lode. In the 57 fm. level, west of Hodges's cross-course, on Tolcarne tin lode, the lode has not been taken down; when last taken down it was worth 10*l.* per fm.; ditto east, on the same lode, lode not taken down in the past week; when last taken down, worth 4*l.* per fm. In the shallow adit level, west of Tregoning's shaft, on the same lode, the lode is worth 5*l.* per fm. The stopes in the back of the 12 fm. level, west of Pryor's winze, on the same lode, are worth 14*l.* per fm. The stopes east of Tregoning's shaft, in the 12 fm. level, on the same lode, worth 26*l.* per fm.; the stopes in the bottom of the above level, west of Tregoning's winze, on the same lode, are worth 24*l.* per fm. The stopes are working on tribute. The winze in the bottom of the deep adit, on Williams's cross-course, is communicated to the rise in the back of the 47 fm. level, in the same cross-course, during the past week.

WEST WHEAL VIRGIN.—We are still sinking the engine-shaft by eight men, are down from 4 to 5 fms. under the 9 fm. level, and we find the lode much better the last 6 ft. in sinking than it was for 2 fathoms before, and I am glad to say we have a good lode of tin going down. We are working over the 9 fm. level west of engine-shaft by two men, and have a good lode, all in whole ground.

WHEAL ADAMS.—The lode in the 72 is 5 ft. wide, composed of quartz, mundic, and jack, with lead disseminated throughout; the end is producing about 1 ton of the latter per fm.; the ground is rather hard for driving at present, but wet, and we shortly expect a change will take place for the better, and more favourable for breaking. It is more than probable that there is more lode still standing in the western side of the level or end, as water is coming therefrom, which we consider a good indication. The lode in the bottom of the 60 will produce full 8 tons of lead per fathom; it is a little improved since last reported, and is a very good course of ore. The men working in the back of the 60, on 8*s.* tribute, are driving in an end from the north part of their limits, to facilitate the working of their pitch, after which the lode can be taken away more advantageously; the cross-cut driving west of the 60 fm. level, to intersect the western silver-lead lode, is in favourable ground for driving. The cross-cut driving east from the 40, north of engine-shaft, to cut the eastern lode, is in decomposed porphyry; the cross-cut driving west, intended to intersect the silver-lead lode, is in kindly ground, and good for mineral; the cross-cut driving west, in the 40, north from old shaft, is in good white killas ground; the end driving north in this level, which is a small distance from the lode, is in favourable ground; the same remarks will apply to the level above. The rise in the back of the 28 is kindly; the lode is full 2 feet wide, composed of barytes and good stones of lead.

WHEAL AUGUSTA.—The men are still engaged in cutting a fork to hold the water in the 18 fm. level; and a stone whim is being erected, as also the account-house and smith's shop, but their progress has been obstructed, owing to the boisterous weather. We intend to begin sinking our engine-shaft under the 18 fm. level with all possible speed, so as to get down, and open more tin ground; after which we shall be in an excellent position to set our present bottoms on tribute for full one-third less than if worked just now, and, of course, we should, at the same time, be opening more tin ground for tribute. We have an excellent lode pitch for tin in our present bottoms; this will be kept in reserve for tributers.

WHEAL CREBOR.—The lode in the 12 end, at Cock shaft, on the south lode, is just as last reported. In shooting down the west side of the cross-cut in the 24 fm. level, at Cock shaft, the men broke some good stones of copper ore on Tuesday; it appears to be near the lode; a few days more will prove whether it is so or not; if it is the lode we are seeking for, it will give an encouraging feature to this part of the mine, as this lode is seen nowhere below the 12. The other parts of the mine are without any material alteration. There is a good lode for ore in the new pitch at Rundle shaft.

WHEAL EMILY.—I have had the shafts and cross-cut cleared up, and found a few tools, but not like the quantity as stated, and which was specified upon the inventory Mr. Simmons and myself took us being down there. I have examined the ground in the bottom of shaft, and set a stent of 3 fms., at 12*l.* per fm., the takers finding four men as landers and kibblers, with all costs, and the company finding the whim cost only. I have dropped the tapes, and find the shaft 9 fms. 6 in. from the brace in the 12 fm. level; there is a small sinkage of 2 feet as a fork. The cross-cut is extended 5 fms. east; there is a north and south lode driven through 3 fms. from the shaft in this cross-cut, underlaying west about 2 ft. in a fm., about 1 ft. or 14 in. wide; it is composed of spar and a dark flookan, and soft killas, mixed throughout with fine lead, with a grey ore, much the appearance of grey silver ore. This lode, if it continues its underlay as appears at present, will come in the shaft in 8 or 9 fms. deeper. The men have commenced sinking briskly, and expect in a few weeks to be deep enough to communicate with the deep level. I beg to enclose the cost-sheet for Nov., 40*l.* 3*s.* 5½*d.*; our pay-day was on the 14th instant.

WHEAL GOLDEN CONSOLS.—At Thorne's shaft, in the 77 fathom level south, the lode is 2 ft. wide, producing 12 cwts. of ore per fm., and is very kindly; in the same level north, the lode is 1 ft. wide, producing 7 cwts. of ore per fm., with indications of further improvement. In the 70 fm. level north the lode is 1 ft. wide, producing 14 cwts. per fm. In the stopes south of the winze the lode is 20 in. wide, producing 1½ tons of ore per fm. At the engine-shaft, in the 70 fm. level, south of cross-cut, the lode is 20 in. wide, producing a little ore. In the 60 fm. level south the lode 2 ft. 6 in. wide, yielding 7 cwts. of ore per fm. The tribute pitches are much as usual. On the 21st inst. 70 tons of lead ore will be ready for sampling.

WHEAL HAMLYN.—I see little or no change since my last report, neither do I expect to, until we get into the east and west lode.

WHEAL HARRIS.—In the cross-cut, in the 25 fm. level south, we have intersected the lode, but have not cut through it to ascertain its size and character, which the men are doing with all speed, so that we may be able to give you a full report next week; we have cut in the lode about 15 in., which is composed of lead, spar, mundic, copper ore, &c.—a very promising one. We broke some good stones of lead ore on Tuesday, and brought them with us to Tavistock, where we had one stone assayed as it was broken from the lode, and it produced 9 in 20 for lead, which I consider to be a good sample, as the stone was not dressed.

WHEAL LANGFORD.—*Dec.* 9.—Since my last to you of the 27th Nov., we have driven about 5 ft. in the south cross-cut, west of Langford shaft, and cut a branch from 9 to 12 in. wide, interspersed with lead and mundic. I have not yet assayed it, therefore cannot say the produce for silver; but we are saving the lode clean to itself. I will assay it to-morrow, and let you know the produce by Wednesday's post. We have not taken down any of the silver lode in the north adit level since my last; but shall do so this week. We have at present about 15 cwts. of silver ore at the surface, of a moderate quality.

— *Dec.* 11.—I carefully assayed some of our new lode yesterday, and I find it contains 28 ozs. of silver to the ton. We are driving both east and west on the course of the lode, and I hope we shall soon have an improvement. The stopes in the back of the north adit level, on the course of the lode, is improved within the last two days.

— *Dec.* 16.—Since writing you last, we have taken down some of the silver lode in the north adit level; the lode is looking very favourable. We broke about 3 cwts. of good quality, and about 4 cwts. of moderate quality; but, in consequence of the surface water coming down so much at this season of the year, we cannot work to best advantage. The new or south lode is of a promising character, and expect shortly an improvement. We have not done anything on the copper lode since my last at Wheal Barring, or on the Commons. We have taken up an open cutting, and commenced driving an adit, which we have driven about 5 fms. We have commenced dressing the silver ore; and hope, in the course of 10 days or a fortnight, to have a parcel (say) of about 22 cwts. ready for market.

WHEAL PROVIDENCE.—There is no alteration in the appearance of the lode since the last report. The building of the engine-house is progressing as quickly as possible, and is expected to be completed in about five weeks.

WHEAL SARAH.—We shall commence costeaning forthwith, and as soon as we ascertain where the lode is, I shall begin sinking the shaft, and have no doubt of getting four more men, to complete the pare, in a few days. The ground is already marked for the operations contemplated.

WHEAL VINCENT.—I said in my last report that the lode was heaved with a slide. On the 13th inst. I put the men to drive north, and before the day was over we cut a good lode, about 4 ft. further north than it was before; a slide of this description is very seldom seen in the earth, but I believe it does good, for we have a fine tinny lode in sight—how large I cannot say, for we have not had time to cut through it. I shall furnish you with more particulars next week. I believe shares are, at this present time, worth pounds per share more than they were two months ago, and the more open the mine the better I like it.

— Since our last report we have cut the lode west of the slide in the west end, at the 10 fm. level; for the last 8 fms., before we cut the slide, our lode was very much improved, and continued good home to it, which heaved the lode 4 ft. further north, where it is increased in size and quality. Our lode is now about 2 ft. wide, and there is no necessity for stamping the smalls, which we shall dress another way. We hope to get a good batch of tin from this end in a short time. We have also commenced sinking below the 10, in the new engine-shaft, and shall drop our lift this week and put the branch rods to work, in order to get down to the 20 fm. level as soon as possible.

FOREIGN MINES.

ALTEN MINING ASSOCIATION.—Estimated produce for Oct.:—

Mines.	Tons of Ore.	Per Cent.	Fine Copper.
Raipas	70	10	7·00
Old Mine	78	5	3·90
United Mines	9	4	0·36
Michell's	6	6	0·48
Mancur's	3	7	0·21
Ryper's	7	8	0·56
Total tons	175		12·51

Mining Report from the 5th Oct. to the 1st Nov.

Raipas.—Since my last report we have ascertained the size of No. 11, which is 4 fee[3] big, at the same time leaving reserves in the roof and bottom equally good and solid, as when last described; its run is east and west, the dip being to all appearance south, upon an angle of about 60°. The appearance of the lode is at this moment wearing a most brilliant aspect, and will fully bear out the expectations we had formed of its capabilities on its first discovery. In the other parts of the mine some slight changes for the better have taken place, and upon the whole the workings here are assuming a very promising appearance, and the returns will be found fully to corroborate the promise made in my last.

United Mines.—At this mine we have no further change to note for the present; we continue to explore Ward's lode, which yields a small quantity of ore, and we have fair prospects of shortly being able to make better returns.

Old Mine.—The several workings at this place continue to give favourable results, and the tributers' returns are highly satisfactory. Slungi's sink is not looking quite so promising as formerly, the lode being more mundicy has, consequently, become less productive; the returns, however, are still very good. The new sink, towards the north-east, is considerably improved, the prospects are promising, and the ore is of a richer quality. The ground in the adit level is somewhat better for driving, and the men are making good progress.

Ryper's.—The lodes here are small but promising, and the tributers are making rather more satisfactory returns.

Mancur's.—The lode in the new sink is about 2 ft. wide, and very regular; there is a small branch of ore on one side, but the prospects are not quite so promising as when last reported.

Michell's.—The tribute operations are less productive than we could wish, still the returns are remunerative, and we hope they will experience an increase next month. Our workings are now confined to some of the old stopes, from which we cannot at present expect to derive any great benefit.

LINARES MINES.—The following has been received from Capt. Curry:—

Pozo Ancho, Dec. 7.—San Antonio winze is now sunk to a depth of 10 fms. 2 ft. below the 45 fm. level; we purpose sinking this 2 ft. more, when we shall commence driving east and west on the course of the lode, to be called the 55 fm. level; in this winze, for the past month, we have sunk through a large lode, with occasional bunches of lead, producing from ¼ to 1 ton per fathom—the same may be said of its present appearance. Wilson's shaft is sunk 9 ft. below the 45 fm. level; in this we have a good lode, yielding 4 tons of lead per fm.—the ground being rather hard, our progress is slow. At Shaw's shaft we have completed a winze and winze plat, we have now to fix the penthouse, when we shall commence sinking below the 45 fm. level; we have here a lode 10 ft. wide, with a leader of lead, worth from 2 to 3 tons per fm. San Juan shaft is sunk 25 varas below the 31 fm. level, leaving about 5 varas more to sink to communicate with the 45 fm. level—here the ground is also rather hard, and the progress slow. We have let a contract to open a plat in the 45 fm. level, so as to be ready for all dispatch of stuff, when this shaft shall have been communicated to this level. In the 31 fm. level, east of Shaw's shaft, we have a large and promising lode, with a leader of lead, yielding 3 tons per fm. The 45 fm. level is unproductive; we have set the men to cross-cut a little to the north, in order to reach the north side or wall of the lode, on which our level in the 31 is being driven. It gives me much pleasure to inform you that our tribute department is looking exceedingly well. We have now nine contracts on tribute—five at 1*l.* 16*s.* and four at 1*l.* 7*s.* per ton, each and all to pay for dressing and all other costs. Our raisings for November are 105 tons, and we may safely calculate on 120 tons for the present month. The 31 fathom level was driven in November 6 varas 1 ft. 6 in., and the 45 fathom level 4 varas 2 ft. 3 in. (Spanish).

Account of ore:—Stock at Linares, November 30, 132 tons 5 cwts.; weighed in Dec. 7, 19 tons 9 cwts.=151 tons 14 cwts.; sent for shipment, 23 tons 13 cwts.; remaining at Linares, 128 tons 1 cwt.; ditto at Bayles, 39 tons 16 cwts.; ditto at Seville, 36 tons 17 cwts.; ditto at Malaga, 58 tons 13 cwts.; on board ship, 126 tons 10 cwts.—Total in stock, 389 tons 17 cwts.

THE WORTHING MINING COMPANY:—

Aug. 23.—Mr. Hallett left the mine on Tuesday evening last; the timberman was then proceeding with the costeaning at water-wheel lode, and we shall be enabled in our next report to speak more positively upon these lodes; from observations made in a rough way, we consider we have yet to drive from 3 to 5 fms. in the level before we cut the lodes, and in the shaft we expect to reach the 40 fm. level first. We cannot say that any blame attaches, as the shaft is carried down as close to the hill as possible; at the same time, if our rough measurement is correct, we ought not to have been led to expect that we should cut the lode at 25 fms., the visitor's report recommending a shaft to be sunk to cut it at 20 fms.; these differences do not amount to much, as, guided by the appearance in the level, we shall now drive to the lode from the shaft, according to circumstances. At the middle gully engine-shaft, the water was less on Monday last; the average lift was 8½, 36 gin buckets per hour, and on Tuesday from 6½ to 7; the water in Hodgkinson's winze is still diminishing. We have had the north gossan shaft lode opened ready for working, which presents about the same appearance as the bottom of middle gully level—small specks of copper stains and gossan; but, as we did not contemplate going any depth here, unless it had opened more promising, we have drawn off the miners and placed them again temporally at middle gully south end level, until we are enabled to go on with the engine-shaft. The lode at Hodgkinson's winze increases in size, at present showing 2 ft. of good spar, with large spots of rich copper; we expect to get down upon a vugh during the month, and hope to put on six hands to sink as deep as the drainage will permit us. Capt. Mitchell, who has been visiting the colony for mineral purposes, said to be for the information of Messrs. Williams, Foster, and Co., has been to Worthing, and, in conversation with him, he expressed a good opinion of the mine; he is about returning to England, and his reports will, no doubt, attract a great deal of English capital to the colony.

Sept. 16.—The water-wheel shaft is now 23 fms. 3 ft. 9 in. deep, and resumable at 25*l.* per fm., but the men refuse this price, and I shall try other men before offering a greater price. We have gone through a portion of the lode, and possibly all; to be the more certain of this, before quitting our perpendicular, it is advised to drive the cross-cut west 3 fms., as well as to costean at the surface several fathoms, either for better information on this lode, or the finding of proximate lodes that may exist, to be commanded by the same shaft. As soon as we are satisfied on the above points, we shall be in a position to decide either on following the soft ground on the lode already arrived at, or continuing our perpendicular; the lode now struck shows a soft siliceous and other quartz, with yellow sulphuret of copper and mundic. I would advise you to extend a level now on the course of this lode southward under the gully, where the first and best copper was found; this might unwater the original winze, to admit of investigation formerly attempted at that point, as well as inform us as to the lode's identity. In reporting upon water-wheel shaft, I intended to recommend the opening a drain below the great pool, which I think being let off will much relieve the shaft, as the greater part of the water therein seems to come from only just below the level of the river, although the shaft is 23 fms. deep. The middle gully, south end, is now extended to 37 fms 5 ft., and exhibits copper—I think the best I have ever seen from the level. I must repeat my idea before expressed, that at the surface there is not a trace of copper within a great distance; then, if so small a depth as 8 fms. shows so favourable a change in nearly all our driving, what have we to expect at increased depths? On this I hinge my hopes in advising you at once to erect the 22-inch engine on the middle gully shaft, now 11 fms. 1 ft. 3 in. deep, and no further to be sunk without it, but at double price for the water, 500 or 600 gallons per hour, taking care that the machine be so placed as to serve ultimately for winding. The tributers' surface bunch of ore, at Hodgkinson's, did not prove sufficiently encouraging to the men, who have resigned, after raising about 2 tons of ore.

Sept. 16.—The water-wheel shaft is being sunk 4 fms. 0 ft. 3 in., and is now worth 25*l.* per fm.; but the miners have refused it at that price—whole depth of the shaft 23 fms. 3 ft. 9 in. Since we first cut the lode in this shaft, we have sunk about 5 fathoms, and, judging the lode to underlay about 3 ft. in a fm., the width of it is about 15 ft., composed of branches of carbonate of lime, a good-looking spar, killas, and flookan, varying in width from 1 ft. to 4 in., exhibiting now and then large and small specks of yellow ore and mundic, which corresponds pretty well with the width of the lode at the surface, and also with the lode we have driven through in the end west of said shaft; but as the lode on the surface seems more perpendicular than the lode in the shaft, it is thought advisable to drive the west end 3 fms. further, which we have set for 12*l.* per fm.; the end is being driven 3 fms. 3 ft. 8 in. About 6 ft. behind the end we have cut a flookan, about 4 in. wide, which seems to have effected a revolution in the ground, and instead of running north and south, as formerly, it seems to run east and west, but whether it will continue that course far from flookan remains to be proved. On the 30th August we recommenced to sink the gully shaft, which is being sunk 1 fm. 0 ft. 1 in., but the water is so quick as to beat the men off their work; the whole depth of the shaft is 11 fms. 1 ft. 3 in. The end south is being driven 1 fm. 2 ft. 10 in., and having shot a couple of holes in the lode, we find it has improved a little since last month, and have set it at 18*l.* per fm., to drive through the lode, for the double purpose of seeing its whole width and in hopes of discovering softer ground at the other side of it. The tributers' pitch is hard and poor at present; what with this, and the suspension of the gully shaft, which will cause the water to ran into the pitch, we have ceased working it for the present. From the hollow nature of the ground, as I have already stated, and the locality of the gully shaft being in a central position, it is thought advisable to erect the engine on that shaft. With regard to different phenomena of slides and heaves, I beg to say they are of a different character, although they are sometimes confounded together by the miners. If a lode running north and south, and underlaying east, is intersected by a parallel vein (generally flookan, both in slides and heaves), but underlaying contrary to it, is found at the intersection that the lode has been severed, it is called a slide, which the miner terms cut out by a slide, or thrown up or thrown down by a slide. In this case the miner has to cut through the slide, by sinking or rising through it, in search of the lode. Lodes in the vicinity of slides and heaves invariably prove more productive than elsewhere. A lode being heaved is caused by the intersection of another vein crossing it, either obliquely or at right angles, and sometimes removing it, apparently, a great many fathoms; then the miner has to cut through it, and, from experience, can pretty well judge the direction he has to drive to recover the lode. It is, I think, the opinion of some that heaves are secondary formations; but, for my own part, as I do not recollect of ever having seen the ground in the vicinity of heaves at all fractured, I cannot exactly reconcile myself to this idea; for how tremendous must the convulsion of Nature be, to shift this ponderous globe, in some cases, 70 or 80 fms. one part from the other. Cross-courses (heaves) are beneficial and advantageous, especially in hard ground, where they can drive 10 fms. in about the same time and expense that they can drive 1 fm. in the rock. Another advantage is, that these cross-courses being generally composed of stiff clay, are impervious to water; and in some hollow lodes, were it not for these cross-courses, the drainage world be so extensive, that it would be impossible to work the mine without an immense expense for machinery. From the appearance of the lode in the water-wheel shaft, there is every probability of its becoming more concentrated in depth.

Sept. 23.—Water-wheel shaft is now sunk 23 fms. 3 ft. 9 in.; the inspector and captain's reports have entered so fully into the work of this month, that we have but little more to add. If our computed distance of the lode from the shaft is correct at 27½ fms. on the top of the hill, it must have underlayed as much as 4 ft. 9 in. in the fathom to be cut in the shaft, which it does not present in the cross-cut. The captain estimates the underlay at 3 ft. to the fathom; in such case, if uniform, we should not cut the lode in the shaft under a depth of 40 fms., nor in the cross-cut under 20 fms.; and as the inspector considers the underlay about 2 ft. 3 in., we have given directions to extend the cross-cut another 3 fms., to make as certain as may be that the lode in the level and shaft is the same as the one on the top of the hill. We have also directed costeaning to be done on the top of the hill west to the extent of 20 fms., to ascertain if there are any more parallel lodes. The consideration of extending a level on the course of the lode is postponed, until we have arrived at more certainty about the lodes. The subject of draining below the great pool has already been taken into consideration, and we think it desirable to do this to relieve the water in the shaft cross-cut. We refer particularly to the captain's report upon this work, and for the reasons already assigned have directed another 3 fms. to be driven. Middle gully engine-shaft is now sunk 11 fms. 1 ft. 3 in., but the water increasing upon us, we are compelled to suspend it until the engine is erected. First lode, south end, is now driven 37 fms. 5 ft., exhibiting favourable copper indications, but the lode and country are hard. We have directed the lode to be cut through to ascertain its nature, and in hopes of meeting with more favourable ground on the other side; it is desirable to continue this work from time to time, as we are now fast gaining in back. We purpose costeaning between the flat and middle gully, to ascertain the identity of the lodes. Hodgkinson's winze is necessarily suspended until the engine is erected, as we should not be able to prosecute it on account of the water; the lode has increased to about 3 ft., but poor, a little gossan still in the bottom.

BISHOPSTOWE SILVER-LEAD MINING COMPANY.

At the bi-monthly meeting, held at the mine, on the 19th inst., the following report, from Capt. Francis, was read:—

Dec. 19.—Mr. Evan Hopkins having so lately reported on the mine, leaves me but little to say. The cross-cut east in the mouth of the adit level is driven 8 fms. 2 ft. in metalliferous limestone; the adit level north is now within 18 fms. of the north shaft; it is still in the cross-course, and the ground moderate. The engine-shaft is 5 fathoms under the 10 fathom level, in hard ground. Francis's shaft is 4 fms. 3 ft. below the adit level, and has reached a good course of ore. In consequence of the 10 fm. level south having been driven on the eastern side of the lode, we shall have to drive a cross-cut west 5 fms. to reach the ore met with in the shaft; and it will be necessary to do this before the sinking is resumed—the lode being so full of water. With the trials now in hand, we have every reason soon to expect a profitable mine. We sold 16 tons of ore the last month, and 10 tons this month. The engine continues to do its work well.

DEVON AND COURTENAY CONSOLS MINING COMPANY.

At a special general meeting of adventurers, held at the mine, on the 10th inst., Mr. JOHN SKINNER in the chair,

The report of Capt. Rickard was read to the meeting, in which he fully confirmed the previous favourable reports he had given; and his recommendations, with respect to working the western ground near the river having been taken into consideration, it was resolved that the report should be circulated among the shareholders. A committee was appointed to go over the western ground, and report to the next general meeting on the suggestions made by Capt. Rickard. The mine is in the Tavistock district, and adjoins East Wheal Russell lode on the west; the geological features are of a very satisfactory character, and there is every indication of a good mine when properly developed. In one of his last reports, Captain Rickard gives a full detail of the operations now going on, with the results, as far as they have proceeded. He goes on to say, "the south lode in the deep adit has also been opened on the west of the river, where it is 2½ ft. wide, composed principally of flookan and mundic, and spots of copper ore; there are are also the gossan and other lodes that we have not seen hitherto at the west of the river, but still are known to be promising lodes on the east side, all of which can be wrought conjointly or separately. I consider this part to be one of the best speculations in the county, and well worthy of development, for which I would recommend that a shaft be forthwith sunk to command the north lode, near the cross-course; and, at a depth of 30 to 40 fms., a cross cut may be driven on the cross-course, to intersect the central lodes, the whole of which are available, and the water could be drained off by the same machinery that would drain the north lode." At the late meeting of adventurers, Capt. Rickard expressed his willingness to take shares to the extent of his power, the speculation being, in his opinion, one of the best in the neighbourhood, and the shareholders are represented to be highly pleased with the prospects of the mine. It may be mentioned that Capt. Rickard, in his report, after quoting the account given in the *Mining Journal* of East Wheal Russell meeting, alluding to the high anticipations formed of the lode in that mine, says, "the lode here referred to runs a few fathoms west, and parallel to the great elvan course, shown in our plan, and must run into our sett, and, in all probability, between the No. 3 and No. 5 lodes."

STRAY PARK, CAMBORNE VEAN, AND WHEAL FRANCIS MINING COMPANY.

At a general meeting of adventurers, held at the mine on the 13th inst., the accounts were presented, showing—Balance in hand last account, 381*l.* 11*s.* 3*d.*; copper ores sold, 1751*l.* 14*s.* 6*d.*=2133*l.* 5*s.* 9*d.*—Mine cost, September and October, 673*l.*; merchants' bills, ditto, 280*l.* 10*s.* 6*d.*; tribute pay, subsist, and lords' dues, 487*l.* 14*s.* 7*d.*; loss in Wheal Francis, during two months, ending 31st Oct., 78*l.* 9*s.* 1*d.*: showing balance in favour of adventurers, 613*l.* 11*s.* 7*d.*; to which is to be added copper ores sold Dec. 5, 1336*l.* 3*s.* 11. The meeting was adjourned to the 20th inst., to consider matters of interest to adventurers.

The following report, from Capts. R. Eustice, E. Ralph, and R. Pryor, was read to the meeting:—

Dec. 13.—Camborne Vean: In the 65 end, driving west, on the Town lode, by two men, at 2*l.* 18*s.* per fm., the lode is 10 in. wide, yielding good stones of ore. In the 70 end, driving west, by 4 men, at 6*l.* per fm., the lode is 1 ft. wide, yielding 1 ton of ore per fm. In the winze below the 120, by four men, at 12*l.* per fm., the lode is 1 ft. wide, yielding 1 ton of ore per fm. In the 135 end, driving west, by six men, at 7*l.* 10*s.* per fm., the lode is small and unproductive; in the stopes below this end, by four men, at 3*l.* 10*s.* per fm., the lode is 1 ft. wide, yielding 1½ ton of ore per fm. In the 150 end, driving west, by two men, at 7*l.* per fm., the lode is small and unproductive; in the same end, driving west on old south lode, by four men, at 8*l.* per fm., the lode is 1 ft. wide, yielding stones of ore; the cross-cut driving south in this end, by four men, at 3*l.* 10*s.* per fm., is in 38 fms. south of the south lode. In the 170 end, driving east, by two men, at 8*l.* per fm., the lode is 1 ft. wide, and unproductive; in the same end, driving west, by six men, at 8*l.* 10*s.* per fm., the lode is 18 in wide, yielding stones of ore; in the stopes above this level, by four men, at 6*l.* per fm., the lode is 2 ft. wide, yielding 2½ tons of ore per fm. In the 180 end, driving east, by six men at 11*l.* 10*s.* per fm., the lode is 2 ft. wide, yielding stones of ore; in the winze sinking below this level, west of the cross-cut, by six men, at 13*l.* per fm., the lode is 3½ ft. wide, yielding 4 tons of ore per fm.; the cross-cut driving north in this level, by four men, at 11*l.* per fm., is in from shaft 30 fms. The cross-cut driving south in the 200, by eight men, at 11*l.* 10*s.* per fm., is in from shaft 16 fms.

Wheal Francis: In the 56 end, driving west on a south branch, by two men, at 6*l.* per fm., the lode is 6 in wide, yielding stones of ore. In the winze sinking below the 80, by six men, at 9*l.* per fm., the lode is 2 ft. wide, yielding 4 tons of ore per fm. In the 90 end, driving west, by four men, at 10*l.* per fm., the lode is split in branches and poor; in the winze sinking below the same level, by four men, at 3*l.* per fm., the lode is 10 in. wide, yielding good stones of ore; in the rise above the back of this level, by six men, at 10*l.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm. In the 10 end, driving west, by six men, at 8*l.* 10*s.* per fm., the lode is 3½ ft. wide, yielding 7 tons of ore per fm.; in the winze sinking below this end, by six men, at 8*l.* per fm., the lode is 20 in. wide, yielding 3 tons of ore per fm.; in the stopes above this end, west of the winze, by six men, at 5*l.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm.; in the stopes below this level, west of the winze, by six men, at 3*l.* 10*s.* per fm., the lode is 2 ft. wide, yielding 2½ tons of ore per fm.; in the stopes below this level, west of Floyd's winze, by six men, at 3*l.* 10*s.* per fm., the lode is 2 ft. wide, yielding 3 tons of ore per fm. In the 110 end, driving west, by six men, at 7*l.* per fm., the lode is 14 in. wide, yielding 3 tons of ore per fm. In the 120 end, driving west, by six men, at 12*l.* per fm., the lode is 1 ft. wide, yielding stones of ore. In the 180 end, driving west, by six men, at 11*l.* per fm., the lode is 18 in. wide, yielding good stones of ore.

The average gettings of miners in September and October were—Tutwork-men, 2*l.* 5*s.* 6*d.* per month; tributers, 2*l.* 3*s.* 6*d.* per month.

WHEAL MARY MINING COMPANY.

The usual two-monthly meeting of adventurers was held on Wednesday, the 18th inst., at the offices, New Bond-street, London, when the accounts, of which the following is an abstract, were examined and passed:—

Balance of last account		£380 17 0	
Mine costs for September		442 1 10	
Ditto for October		400 3 10	
Merchants' bills		333 12 0	£1556 14 8
By copper ore sold, Sept. 26	£352 11 10		
Ditto Oct. 24	304 12 0		
Less 1-12th dues	36 10 2	£620 13 8	
Call of 10s. per share		495 0 0	1115 13 8
Leaving balance against the mine			£ 441 1 0

A call of 15s. per share was made.—The following report, from Capts. Paul Rabey and C. Andrawartha, was then read:—

Dec. 16.—At Wheal Mary lode, since the last account, we have cut through the lode in the 100 fm. level, and driven about 2 fms. west; the lode is from 6 to 7 feet wide, composed of spar, capel, and ore, producing about 3 tons of coarse ore per fm.; it is letting go much water, and has to a great extent drained the upper levels, and is looking kindly. The 90 fm. level west is driven about 18 fms. west of the engine-shaft; the lode is 3 feet wide, producing about 2½ tons of ore per fm., and looking kindly. No. 1 winze is holed from the 80 fm. to the 90 fm. level, and has opened tribute ground; this winze produced about 1½ ton of ore per fm. during the last 4 fms. in sinking. No. 2 winze, sinking below the 80 fm. level, is sunk about 2 fms.; the lode is about 6 ft. wide, with stones of ore. Mears's shaft, sinking below the 80 fm. level, is sunk about 15 ft. below the said level; the lode in this shaft is about 7 ft. wide, producing about 4 tons of ore per fm., and improving. Since our last account we have recommenced driving the 80 fm. level west; the lode in this end is disordered by a slide. In the 70 fm. level east the lode is still small and poor; the lode in the bottom of the 50 fm. level east, over this end, will produce 3 tons of ore per fm., and the water having been drained by the 70 fm. level, we propose running a winze through this ground. At Parent lode, in the 50 fm. level west, the lode is about 1 ft. wide, with stones of ore; this level will unbottom the old western mine on this lode, which it will probably drain in the course of next summer. At middle north lode, in the 12 fm. level, east of Charles's shaft, the lode is small and poor. Camplin's shaft has been suspended sinking, by reason of the water, and the men are put to rise in

the back of the 40 fm. level against this shaft. The new shaft, west of Camplin's shaft, is also suspended by reason of the water. We have 13 pitches working, at an average tribute of 11s. 4d. in the 1l.

We sold on the 24th Oct. 89 tons 16 cwts. of copper ore, which realised 304l. 11s. 11d.; on the 28th Nov. 104 tons 9 cwts. of copper ore, realising 367l. 15s. 5d., and on the 26th Dec. next we expect to sell about 100 tons.

The bottom levels on Wheal Mary lode are steadily improving, and we are of opinion that the 90 and 100 fm. levels have got under the black strata, which impoverished the lode, and we have every hope that in the next 10 fms. sinking we shall have a good lode, and which it will take us about eight months to effect.

The following has been received by the purser from Capt. Wm. Bray:—

Consolidated Mines, Dec. 12.—I was underground in Wheal Mary yesterday, and have great pleasure in stating to you, that the main lode at the 100 fm. level driving west is looking very well; it is all of 6 feet wide, carrying a good branch of ore towards the north part, about 18 in. wide, rising in the end as they drive west; the south part of the lode carries some very kindly spar, and is leaving down all the water from the winze and Mearne's slightly westward, which looks very promising, and there is also a much lighter killas than you had upwards; I hope it will prove to be something good enough to realise that which you have so nobly sought after.

WHEAL ARTHUR (CALSTOCK) MINING COMPANY.

The bi-monthly meeting of adventurers was held on Wednesday, the 18th inst., at the offices, White Hart-court, Lombard-street.

The accounts for the preceding two months having been passed, and the financial position of the company fully discussed, a resolution was adopted, that the secretary be requested to convene a special general meeting on Tuesday next, to consider the propriety of allowing the adventurers to take up a certain number of undisposed of shares; also the necessity of permitting each shareholder, who has purchased shares at 2l. each, to take up an equal number in addition, in order to enable the committee to offer the then undisposed of shares to the public at 1l., and to adopt such other measures as the majority may deem prudent, and on general and important business. The prospects of the mine were represented to the meeting as being highly favourable, and the reports continue satisfactory.—A voluntary report, sent up by Mr. John Spargo, captain of the Great Wheal Sheba, says—

"I saw Capt. Carpenter yesterday, and am glad to hear that you are progressing to the purpose in Wheal Arthur; I am also glad that you have chosen for your agent an honest, steady, and practical miner, and one who knows his work well. I do not know what the mine is thought of in London, but every practical miner in this neighbourhood thinks it one of the best speculations that is in operation in the district. As to my own opinion, I believe it will be one of the first mines in the Calstock district that will declare a dividend, after proper machinery is erected."

The last report from the captain of the mine says—

"If we had not been of late hindered by the severe rain, we should have got through the reservoir shaft yesterday. After this work is done, I should advise you to put men to drive north on the silver-lead lode, in order to cut the north copper lode immediately. The men are raising some very good work for copper in the back of the level. By putting in a few sets of timber in the engine-shaft, and a few ladders, we shall be able to drive on the silver-lead lode at once."

WHEAL TRESCOLL MINING COMPANY.

A general meeting of shareholders was held at the White Hart Inn, Coggeshall, on Wednesday, the 18th inst.—H. Giles, Esq., in the chair.

The minutes of last meeting having been confirmed, the following report, from Capt. J. Webb, was read to the meeting:—

Dec. 14.—I am happy to say, that I never had to report before with more satisfaction as to the appearance of the mine. Mr. Beard will recollect, when here, that we broke some fine stones of tin in the bottom of the 20 fm. level, a little west of the flat-rod shaft; at that time we were opening a back right above it, and the lode much disordered; since then, in this back we have discovered the richest course of tin I ever saw in this mine, the same course of tin that we discovered in the adit level dipping east before the slide, and I believe there is not the least doubt that this course of tin will make very rich and lasting in depth, as the lode is greatly altering for the better. In sinking the flat-rod shaft we have now good saving work, and improving every foot we sink; we have also a good lode in driving east on south B lode, ground very good for driving. When Mr. Beard was here the south cross cut was somewhat harder, but now is in fair ground, and there is a great deal of water coming from it; it appears we are not far from the lode, which I hope will be good when cut, as we had a fine course of tin in the adit above. I hope we have conquered our hard ground at this part, and shall soon cut the B lode and other lodes south, which will greatly alter the value of the mine, and I trust now every month the mine will improve, and give regular returns. All the machinery in the mine is in good working order, and I hope by the next meeting to report of the flat-rod shaft being down to the 30 fm. level, with a real good course of tin in it; but I should advise the company not to stop the flat-rod shaft sinking before it gets to the 40 fm. level, which will prove the north lodes, and make a quantity of ground to work away.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

The Milwr Mines.—We are glad to learn, from good authority, that an excellent discovery has lately been made in this mine in the adit level, on a new vein to the south of the one recently so productive, and about 150 or 200 yards to the east of the present worked ore ground, from where a cross-cut is being driven, and is expected shortly to intersect it. The ore now discovered is 18 inches wide, solid, yielding from 7 to 8 tons per fm.; about 4 yards have been driven on the ore, with bottom and roof equally good with the driving. This grant is extensive, and but little worked, and in the most desirable part of this mining district, and there cannot be a doubt, under the present manager, that a great, lasting, and profitable concern will be the result from their trials now going forward.

Tyn-y-Worglod Slate Quarries.—These quarries are now opening on a scale commensurate with their known and proved excellence, under the chief direction of St. Pierre Foley, C.E. and M.E., secretary to the Mining Company of Wales, who is now on a visit to these quarries, and entering on large contracts to carry out the views of the company now in possession of this valuable property. We also learn that Mr. Foley proceeds to inspect the rich copper mines of Crafnant, near Harlech, which we noticed several times lately as reported to us of amazing produce. Also, the Prince of Wales Silver-lead Mines, near Dolgelly, both of which belong to private companies, and the several slate and slab quarries belonging to the Mining Company of Wales. On his return to London, the latter end of this month, it is intended to submit the heads of Mr. Hopkins's valuable reports on the above mines, lately made by him during a tour of inspection, in company with Mr. Dumsreq and Mr. Foley, in addition with the statistical views, &c., now be taken by Mr. Foley, and which we hope to have the pleasure of placing, through our columns, before the shareholders and others interested.

Wheal Langmaid.—They have a lode here 4 ft. wide, with cubes of lead good saving work; but, owing to the increase of water, are obliged to erect a water-wheel. Should the lode prove as productive at the next level, which there is reason to believe it will, there will be some good samplings returned,

Balnoon Consols.—The adventurers in this mine, after trying several part without success, are at length likely to be rewarded for their perseverance. There is a beautiful lode in the western flat-rod shaft, sinking near Wheal-Ancient; it is about 6 ft. wide, producing rich stones of tin; it is considered to be the best and most promising lode ever seen in the mine. There is also a very rich bunch of tin gone down under the 10 fm. level, driving east from said shaft, which, when the shaft is down, and another level driven in to cut it, is likely to prove very productive. Considering the vast quantities of tin which have been risen in this mine by former workers, and for which she is well known, and also the present appearances, it is likely that the present adventurers will have a rich return for their outlay.

East Craigwen (silver-lead).—This mine is situated in the lordship of Merioneth, and is the intermediate sett between Craigwen and Cowarch, both in full operation. The company formed for working this mine found their expectations of success mainly on the fact that the rich silver-lead lodes, from which large quantities of ore are obtained from Craigwen and Cowarch, also run through East Craigwen, and it is stated that the great silver-lead lode of Craigwen can be worked on the vein without a cross-cut, at a depth of 50 fms. lower than in Craigwen. It is now in work on the Cost-book Principle, and is held direct from the lord of the manor for 21 years, at a royalty of 1-12th, and the purchase money, for the work done and transfer of the lease to the adventurer, is 2000l. Cap. Hugh Jones reports in the most favourable terms as to the capabilities of the mine. He especially refers to four lodes which he had inspected, and which are "quite sufficient to make a good mine," remarking likewise that there are many more lodes in the sett. One of the four lodes he mentions is from 7 to 10 feet wide, composed of barytes, carbonate of lime, and mundic, in which are fine strings and stones of silver-lead ore. The cost of getting the mine into proper working, providing machinery, water-wheels, &c., and putting it in "paying order," he estimates at from 2000l. to 3000l. He calculates on a plentiful supply of water for the machinery from a lake at the top of the mountain, just above the middle of the sett, from which he states a saving will result of between 1000l. and 2000l. per annum. The mine is divided into 2000 shares, of 2l. per share.

The Prince Albert (tin and copper).—This sett, situate in the parish of Perranzabuloe, Cornwall, a short distance south of Great St. George and Wheal Leisure Mines, is about 400 fms. square, and operations on this spot were commenced in 1841, when a shaft was sunk, and about 300l. worth of tin was obtained by partially working on two of the lodes. The prospects of the late adventurers were considered most favourable, when, owing to the embarrassments of a party holding three-fourths of the mine, the workings were suspended, and have not been since resumed. The sett is now obtainable at the moderate dues of 1-18th, and new adventurers could at a very moderate outlay develope the resources of the mine by following out the operations formerly undertaken, which were sufficiently promising to justify the anticipation of a profitable return. This expectation is further strengthened by the fact that the old and productive lodes of Blue Hills, Pink, Royal Polberro, &c., pass through the sett; there is also a good stream of water running within 20 fms. of the shaft, and from the angle of the lodes in the adit level it is expected they will intersect at a depth of about 10 fms. It is, we observe, proposed to divide the mine into 1024 shares, of 2l. per share, and it is to be conducted on the Cost-book Principle.

United Mines (tin).—This sett, which includes the Tavistock Consols and Wheal Anderton, is about one mile south of Tavistock, and in the immediate vicinity of some of the best dividend-paying mines—viz., Wheal Friendship, Devon Great Consols, and Wheal Franco. An engine-shaft has been sunk 90 fms. on the Anderton lode, and the levels extended about 60 fms. west, and one level has been driven eastward about 50 fms.; other workings are also contemplated from which most profitable results are anticipated. By the purchase of the Wheal Anderton mine and materials a very great saving of time and money must result; and it is recommended by Capts. Seccombe and Lean that the middle and north lodes should be intersected, and a cross-cut be driven north, to intersect the Rix Hill lode, the indications of which fully warrant the outlay. The tin from Tavistock Consols has been assayed by Mr. Joseph Eddy, and pronounced of rich quality. There is a 80-in. cylinder steam-engine, a drawing engine, with 24 heads of stamps, and all necessary buildings, and other machinery on the mine, by means of which the Wheal Ash lodes, it is stated, in the Tavistock Consols sett, may be cut about 100 fms. from surface. The number of shares is 1024, at 10l. each, of which more than 500 are already taken by parties in the neighbourhood. The mine is to be conducted on the Cost-book System, and the reports made afford the promise of the speedy attainment of good returns at a moderate outlay.

Wheal Sarah is a copper and silver-lead mine, situate in the parish of Sourton, near Tavistock, Devon, in beautiful killas, near the junction of the granite range of the Dartmoor hills. An adit has been already driven 110 fms. north from the foot of a hill, in which four east and west lodes have been passed through, the great Sourton Consols lode being about 50 fms. still further north, which have been seen in this sett on the back, producing fine rich copper ore. The first lode passed through in the adit is 1½ ft. wide, producing pure native copper; the second is about 1 ft. wide; the third lode is 7 ft. wide, producing yellow copper ore, greens, &c., mixed with peach, mundic, &c.; and 2 fms. to the north of this is the fourth lode, 10 ft. wide, producing copper and silver ores, with spar, peach, &c.; abundance of water is flowing from this lode, impregnated with sulphate of copper—these two great lodes must come together in a few fms. driving, according to their present bearing. Besides these east and west lodes, the Wheal Calmady great north and south lead and silver lode crosses the lodes before named, the fine gossan of which can be seen on the backs. There is a never failing stream of water, which is accessible for working any machinery that may be wanted, and for dressing the ores. The mine is divided into 1024 shares, and is conducted on the Cost-book Principle. It has been visited by several first-rate mining agents, who have reported very highly of it.

Trimdon Grange Colliery.—On Monday last, a deputation from the workmen of this colliery waited upon Mr. Joseph Smith, jun., colliery viewer, and presented him with a silver salver, in token of their respect for him as their late master and their regret at his leaving the above-named colliery. The salver bears the following inscription:—Presented to Joseph Smith, jun., Esq., by the workmen of Trimdon Grange Colliery, in token of respect, Dec., 1850.

Submarine and Printing Telegraphs—*(From a Correspondent).*—Arrangements are now being made for proceeding with the works of the submarine telegraph between England and France. Eight different lines of communication are to be laid down, at a great expense, and the entire works will be completed, it is expected, before the Industrial Exhibition in May next. The instrument adopted will be that of Messrs. Brett, of Hanover-square. Some interesting and successful experiments have just been effected with this instrument on the wires of the Admiralty, between London and Portsmouth, kindly granted for that purpose by their lordships. These experiments were witnessed by several of their lordships, and by a deputation on behalf of the old Electric Telegraph Company, consisting of Col. Wyld, the engineer, secretary, &c. On Thursday the communications were carried on from the offices at Whitehall to Portsmouth and back (some 200 miles); and yesterday, more effectually to test the capabilities of the instrument, one was placed at either end of the wires. The messages came from the instruments in plain capital letters (with figures and points where necessary), dispensing with the trouble and loss of time in transcribing, and the errors incidental thereto. The superiority of this mode over the system of dots and strokes, hitherto misnamed printing, was manifest. The European and American Electric Telegraph Company purpose using this instrument also.

Plymouth Great Western Docks.—It is reported that the Great Western Railway Company have it in contemplation to raise by loan a sum of 94,000l., to finish the Great Western Docks, in order that Plymouth may become the packet station, and by which the railway will be greatly benefitted.

LATEST CURRENT PRICES OF METALS.

LONDON, DECEMBER 20, 1850.

ENGLISH IRON. *a*	per ton.
Bar, bolt, & square, London	£5 7 6–5 10
Nail rods	6 0–6 10
Hoops	7 0–7 10
Sheets (singles)	7 12 6–8 5
Bars, at Cardiff & Newport	4 15–5 0
Refined metal, Wales*	3 5 0–3 15
Do. anthracite*	3 10 0
Pigs in Wales	3 0–3 5 0
Do. do. forge	2 5 0–2 10
Do., No. 1, Clyde *net cash*	3 0–2 4 6
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 10 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent in Glasgow	2 15 0
Toughened Pigs in Wales	3 10–3 15
Staffordshire bars, at the works	7 6–6 0
Rails	5 0–5 5 0
Chairs (Clyde)	4 0 0
FOREIGN IRON. *b*	
Swedish	11 10–12 0
CCND	17 10 0
PSI	—
Gourieff	—
Archangel	—
FOREIGN STEEL. *c*	
Swedish keg	14 10–14 15
Ditto faggot	15 0–15 5
ENGLISH COPPER. *d*	
Sheets, sheathing, & bolts, *p. lb.*	0 0 9½
Tough cake *per ton*	84 0 0
Tile	£83 0 0
Old copper *e* *per lb.*	8¾d
Yellow Metal Sheathing	8d
FOREIGN COPPER. *f*	
South American	77 0–87 0
ENGLISH LEAD. *g*	
Pig *per ton*	17 5–17 10
Sheet	18 0–18 10
Pipe	18 10 0
Red lead	19 0 0
White ditto	25 0 0
Patent shot	21 0 0
FOREIGN LEAD. *h*	
Spanish, in bond	16 0–17 0
ENGLISH TIN. *i*	
Block *per cwt.*	4 3 0
Bar	4 4 0
Refined	4 9 0
FOREIGN TIN *k*	
Banca, H. C.	4 3–4 4
Ditto, for Export only	—
Straits	4 2–4 3
TIN-PLATES. *l*	
IC Coke *per box*	1 7 0–1 8 0
IC Charcoal	1 13 0
IX ditto	1 19 0
SPELTER. *m*	
Plates, warehoused *per ton*	16 10 0
Ditto, to arrive	16 5 0
ZINC. *n*	
English sheet *per ton*	19 10—22 0
QUICKSILVER *o* *per lb.*	3s. 9d.

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct dis.; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

The steadiness which has been noticed in the iron market for a short time past is well maintained, and more inquiry exists for bars, a large quantity of which has changed hands this week, at a rate equivalent to 4l. 17s. 6d., free on board in Wales: the makers have been large buyers of rails at 5l., and all appearances contribute to justify the expectations of a renewal of this important branch of metals.

In Staffordshire the large orders on hand have stiffened the market, and orders are difficult of execution.

Scotch Pigs.—Parcels actually in store are held very firmly; there is not much animation, however, in the market, owing to the parcels of scrip that continue to be offered for cash.—Quotations remain exactly the same as last week.

Swedish Iron is quiet, but, from the small stock, about 350 tons, holders are firm.

Spelter is without alteration in price. Parcels for spring shipment appearing in the market are readily bought up at 16l. 7s. 6d.

Copper is unaltered in price.

Tin has been rapidly on the advance; large parcels of E. I. have changed hands at increasing prices on speculative account. Banca may be quoted 83s. and Straits 82s. The price of English has not altered since the last advance.

Tin Plates a shade better.

GLASGOW, Dec. 19.—The market for Scotch pig-iron has been very firm during all this week, without any material alteration in price, which has, however, been rather in favour of the seller, and mixed Nos., good brands, are 44s. and 44s. 3d. per ton, prompt cash for Connal and Co. warrants, free on board here. There is much difficulty in obtaining delivery of iron into store from some of the makers, and it becomes more evident that the very large stock of paper which has pressed on the market for a length of time will be greatly reduced, and the trade brought into a healthy state, by having all iron stored. Bars have advanced about 5s. per ton.

NEW YORK, Dec. 4.—Copper: Now is without change, steady at 21 cents. for sheathing, and 16½, six months, for yellow metal; 10,000 lbs. old sheathing brought 18½ cash.—Iron: English bars are firm at $36, at which some invoices have been sold. There is not much offering in the market. Scotch pigs are held at $20½, with small sale. We have to report sales of a few small lots of Scotch pigs at $19 75 c. for cash; $20 75 c. six months.—Lead: Pig has remained very dull, and we know of no sales of either foreign or American. The imports from the 1st January to 1st December are—From foreign ports, 203,299 pigs; coastwise ports, 213,295 pigs: together, 416,594—same time last year, 418,834 pigs.—Tin: Last sales, Banca, 20 c. six months; and Straits at 18½ c. to 18¾ c. Imports from 1st Jan. to 1st Dec., 1850, 36,848 pigs, &c.; 255,674 plates, boxes—same time last year, 47,920 pigs, &c.; 186,991 plates, boxes.

PHILADELPHIA.—Iron is firmly held, and large contracts for spring delivery have been refused at present prices. Lead is steady, with sales of 1500 pigs of galena at $4 85 c. the 100 lbs. cash.

BOMBAY, Nov. 15.—In metals prices have further declined for nearly all descriptions. A large sale of South American copper has taken place at a considerable advance in price. Tile has declined, owing to the large importation from Australia noticed in our last. A good demand exists for braziers', large quantities of which "to arrive" have been offered for sale by native importers. Iron of all descriptions is dull of sale. Swedish steel, both in tubs and fagots, remains as before. A decline has taken place in both sheet and pig lead and spelter.

CALCUTTA, Nov. 7.—The demand for metals is somewhat inactive. Prices of copper have receded a little, and there is only a small demand for local dealers. Spelter is dull, and prices of iron are very stationary.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 8 per Cent., 213¾	Belgian, 4½ per Cent., 91
3 per Cent. Reduced Ann., 97⅞ ¼	Dutch, 2½ per Cent., 59⅛
3 per Cent. Consols Ann., 97⅛	Brazilian, 5 per Cent., 87½
3½ per Cent. Ann., 98⅞ 9 8⅞ 9	Chilian, 6 per Cent., 104
Long Annuities, 7⅞	Mexican 5 per Cent., ex Coup., 35¼ 6¼
India Stock, 10½ per Cent., 271	Russian, 5 per Cent., 110 ¼ ½
3 per Cent. Con. for Opg. 16th Jan. 97 6¼	Spanish, 5 per Cent, 18⅝
Exchcq. Bills, 1000l., 1¼d. 67s pm.	Ditto 3 per Cent., 40⅛

Mines.—It is reported, from the large provincial towns (Leeds, Liverpool, &c.), where markets are established, that mining shares are becoming neglected, in consequence of the sudden and large accession of business in railways. No doubt, this cause must have its influence upon the lesser interest; but the effect here is by no means perceptible—the week having closed with an augmented amount of transactions in all good and dividend mines, and, in many instances, at a considerable advance on previous quotations. We doubt the soundness of the prices paid in some of the newer concerns; and it may be that we are verging to a period when increased caution is necessary by the uninitiated; whilst it must be admitted that the discoveries reported in several of the latter class of mines are, if true, very important for the moment, and highly so, if they prove of a permanent and lasting character.

In the metal market, Lead continues in good demand at full prices, and the supply short.—In Tin, the sudden advance noticed last week has increased, and a large business done; about 10,000 slabs have changed hands, part on the spot, and part to arrive; the market closes very firm. English Tin has participated in the demand for foreign, particularly refined, and smelters refuse to sell at present rates.—Tin Plates are much inquired for, and, as most manufacturers are full of orders for some time, very full prices have to be paid; the market has an upward tendency.—Copper is in good demand, at the quotations.

The copper ores sold at Redruth on Thursday amounted to 3172 tons, which produced 21,118l.

The Tamar Mines sold 86 tons of lead ore, at 20l. 2s. 6d. per ton.

The Holmbush Mine sold 30 tons of lead ore, which realised the extraordinary price of 24l. 18s. 6d. per ton.

The Trehane Mine sold 55 tons of silver-lead ore at 23l. 3s. 6d. per ton.

The North Wheal Friendship sold 14½ tons of lead ore at 11s. 3s. per ton.

The Great Wheal Baddern sold two parcels of lead ore—51 tons at 13l. 13s. 6d., and 11 tons at 13l. 15s. 6d. per ton.

Cwm Erfin Mine sold 33 tons of silver-lead ore, at 14l. 13s. 6d. per ton.

The ticketings for 100 tons of Foxdale (Isle of Man) lead ore fluctuated from 9l. 11s. 6d. by Meredith, to 12l. 4s. 6d. by Walker and Co.

The Great Beam Mine sold seven parcels of black tin, at prices varying from the rate of 43l. to 60l. per ton.

The Tincroft Mine sold 14 tons of black tin, at 41l. per ton; the Mineral Court, Birch Tor, Plymouth Wheal Yeoland, and Wheal Friendship, have also sold some parcels of black tin.

At Polberro Mine 32 tons of tin are ready for sampling, and 138 tons of copper ore were weighed on the 17th inst.

The Cardiganshire silver-lead mine, the Daren, East Daren, Allt-y-Crib, Bromfloyde, and Cefn Bruno, are reported as looking exceedingly well.

At West Tolgus the lode in the shaft continues its size, 2 ft. wide, but not so productive of ore.—At Treviskey a good branch of ore has been cut in driving in the 260 fm. level south.

Bedford United is doing remarkably well; the winze sinking from the 90, 4 fms. beyond the 103 end, is worth 60l. per fm., and set at 3s. tribute. Two pitches set in the back of the 103, at 2s. in 1l.

At Wheal Vincent a fine tin lode has just been discovered in driving north at the bottom of the new shaft, sunk by direction of the superintendent, Mr. Murray, by whom the lode is considered to be of great value.

The Wheal Margaret accounts for July, Aug., and Sept. show—Balance from last account, 122l. 18s. 8d.; ores sold, 3257l. 1s. = 3379l. 19s. 8d.—Mine costs, merchants' bills, and lords' dues, 2700l. 16s.—By dividend of 5l. per share (560l.), leaves balance in favour of adventurers, 119l. 3s. 8d.

The Levant Mine accounts for Sept. and Oct. show—Balance due to adventurers end of Aug., 796l. 13s. 3d.; sale of tin ore, 3078l. 15s. 2d.; copper, 1704l. 16s. 5d.; tin leavings, 177l. 15s. 11d.; carriage of copper and tin ore, 230l. 15s. 1d.; sundries, 27l. 16s. 1d. = 6016l. 11s. 11d.—Mine cost for Sept., 1841l. 10s. 10d.; Oct., 1371l. 12s. 7d.; surgeon and sick club, 45l. 17s. 6d.; coals, 108l. 14s. 11d.; carriage, 271l. 14s. 8d.; bills, 509l. 8s. 7d.; timber, 252l. 8s. 6d.—By dividend of 5l. per share, 800l.: leaving balance for next account, 815l. 4s. 4d.

The Wheal Tremayne accounts for Sept. and Oct. show—Balance in hand, 442l. 18s. 8d.; sales of tin, 2456l. 3s. 9d.; ditto copper ore, 857l. 17s.; ditto arsenic (40 tons, at 3l. 3s.), 126l.; (less lord's dues, 1-20th, 172l.)= 3268l. 0s. 9d.—Carriage of tin, &c., 28l. 4s. 10d.—Mine cost for Sept., 999l. 14s. 1d.; merchants' bills, 260l. 15s. 8d.; mine cost for October, 1006l. 2s.; merchants' bills, 295l. 5s. 1d.=2561l. 16s. 10d.—showing balance in favour of mine, 1177l. 7s. 5d.—By dividend of 15s. per share, 768l.: leaves balance in hand, 409l. 7s. 5d.

The Condurrow Mine accounts to Dec. 16 show—Balance end of Nov., 706l. 8s. 1d.; sales of copper and tin, 2235l. 1s. 2d.=2941l. 9s. 3d.—Labour cost for Oct. and Nov., 1463l. 7s. 5d.; merchants' bills, 422l. 13s. 1d.; lord's dues (1-20th) 111l. 15s. 1d.—leaving balance of profit, 943l. 13s. 8d.

The East Pool Mine accounts to Dec. 17 show—Balance last account, 737l. 1s.; labour cost for Oct. and Nov., 765l. 6s. 7d.; merchants' bills, 290l. 9s.; dues (1-30th), 29l. 8s. 1d.=1822l. 4s. 8d.—By copper sold, 754l. 10s. 9d.; arsenic, 27l.; tin, 100l. 13s. 4d.; water drainage, 120l.; materials sold, 5l.—leaving balance against mine, 815l. 0s. 7d. Mr. John Rule has been added to the committee of the mine.—[The report will be found among our Mining Correspondence.]

At the Tywarnhayle and Nancekuke Mines meeting, held on the 17th inst., the accounts for two months were produced, showing—Produce of ores sold from Tywarnhayle, 3830l. 12s. 4d.; cost for September and October, 3802l. 16s. 5d.—profit, 27l. 15s. 11d. Produce of ores from Nancekuke, 270l. 12s. 3d.; cost, 455l. 14s. 11d.—loss, 185l. 2s. 8d.—leaving balance against the adventurers, 409l. 8s. 5d. The report gives an encouraging account of the mines, in which there is an almost general improvement. The 100 fm. level, east of Gardiner's shaft, is entering the run of ore ground seen in the 90. The 90, east of Bennett's shaft, has passed through a good course of ore for the last 15 fms.; the lode in the end is 5 ft. wide, turning out 10 tons per fm. Bennett's shaft, under the 90, is yielding 8 tons per fathom. The 80 west now yields 3½ tons of ore per fm. Several other levels are yielding 1 and 1½ ton of ore per fm.

At the Stray Park Mines meeting, a balance was shown in favour of adventurers of 613l. 11s. 7d., to which is to be added 1386l. 3s. for ores sold Dec. 5. The balance in hand on preceding account was 381l. 11s. 3s., and the amount of ores sold since the previous meeting, 1751l. 14s. 6d. A report from Capt. Francis, detailing the present state of the workings, was read to the meeting, which was considered very satisfactory. The average earnings, both for tribute and tutwork, were extremely good.

The Wheal Mary accounts showed a balance of 441l. 1s. against the mine. The sales of ore for Sept. and Oct. were 620l. 13s. 8d., and the mine cost for that period, merchants' bills, and including the balance on previous account, amounted to 1556l. 14s. 8d.; the last call of 10s. per share produced 495l., leaving balance as stated. A call of 15s. per share was made. The ore sold in Nov. realised 367l. 15s. 5d., and about 100 tons were to be sold during the present month. The report presents no marked feature for notice.

The East Carn Brea accounts, from April to Nov. inclusive, show—To costs, 562l. 10s. 3d.; by calls, 542l.: leaving balance to purser, 50l. 10s. 3d.

At the Wheal Arthur meeting, it was resolved that a special meeting should be convened to decide on the propriety of allowing the adventurers to take up a certain number of undisposed shares, and also of permitting each shareholder who has purchased shares at 2l. each, to take up an equal number in addition, in order to enable the committee to offer the residue to the public at 1l. per share. The reports read were satisfactory.

The report read at the Bishopstowe meeting states that, from the operations now going forward, there is good reason to expect a profitable mine. The sale of ore last month was 16 tons, and the present 10 tons.

At the Devon and Courtenay Consols meeting, a report from Captain Rickard was read, strongly recommending the working of the western ground, in which several promising lodes are believed to exist, and a committee was appointed to go over that portion of the sett. The opinion given by Capt. Rickard of the speculation is extremely favourable, and the shareholders are well satisfied with their prospects.

At the Bwlch Consols meeting, a number of resolutions were passed, relating to the present state of the mine. A report from Capt. Francis was read, and in future a monthly report will be furnished. In conse-

quence of the heavy expense of working the mine, an effort will be made, by deputation, to obtain a reduction of the royalty and the rents of the ground used for the purpose of the mine.

At the Wheal Trescoll meeting, the report read from the agent of the mine gave a very promising account of the operations. A rich course of tin had been recently discovered, which, it was believed, would prove lasting, and the lode was altering for the better. Should the anticipations expressed in the report prove well founded, the value of the mine will be considerably increased.

Much interesting information, respecting the present position and prospects of numerous mining adventures in Wales, will be found detailed in a series of reports we have received from our correspondent, Mr. Matthew Francis, to whose management they have been confided, and appear to be progressing in a highly satisfactory manner.

Among the transactions during the week have been—Merllyn, Stray Park, Cook's Kitchen, Tremayne, St. Aubyn and Grylls, Alfred Consols, West Providence, Trefusis, East Wheal Leisure, Treviskey, Wheal Seton, Lelant, Bodmin Moor Consols, Wheal Tom, Wheal Augusta, Lamerhooe, East Balleswidden, Wheal Vincent, Crebor, Bedford United, North and South Tamar, Great Sheba Consols, Tincroft, Wellington, Wheal Russell, Peter Tavy, Praed Consols, East Wheal Reeth, Hamlyn, Black Craig, Venton, Holmbush, Wheal Alfred, East and West Tolgus, North Buller, Wheal Harriet, Mary Ann, Daren, North Tolgus, South Wheal Basset, Wheal Margaret, Millpool, Hawke's Point, Trelawny, West Frances, West Treasury, and West Stray Park.

In Foreign shares, business has been done in United Mexican, Australian, St. John del Rey, Barossa Range, National Brazilian, Santiago, and Cobre, the latter being quoted at a slight advance on the price it has so long maintained. The transactions have been limited.

Letters have been received by the Alten Mining Association of a decidedly favourable nature, more especially in reference to Raipas Mine, the lode in which, it is fully anticipated, will bear out the expectations formed of its capabilities. The lode No. 11 is ascertained to be 4 ft. wide, and the reserves in the roof and bottom are equally good and solid. In the other mines the returns are satisfactory, and the operations are progressing well. The produce of the mines, collectively, for October is estimated at 175 tons, yielding from 4 to 10 per cent, and of fine copper 12·51.

The Australian Mining Company have received advices, dated 28th of Sept., of a bill of lading of 132 tons of copper, per *Will Watch*, and 37 tons per *Waterwitch*. They are promised 50 or 60 tons more by the end of October. The mine looks much as last reported.

Full reports have been received by the Worthing Mining Company of the operations at the mines for the last week in August, and the month of September. We see it stated that the lode in Hodgkinson's winze is increasing in size, showing 2 ft. of good spar, with large spots of rich copper. The sinking of the water-wheel shaft is actively continued, and at the date of last letter was sunk more than 25 fms., and that portion of the lode already gone through shows a soft, silicions, and other quartz, with yellow sulphuret of copper and mundic. Other workings were also in progress on the course of the lode southward, and a favourable change was observed at a greater depth, leading to the anticipation of productive results in going downwards. Middle gully engine-shaft is suspended, owing to an increase of water. Hodgkinson's winze is likewise suspended until the engine is erected. Capt. Mitchell, who is on a visit to the colony for mineral purposes, is said to have expressed a favourable opinion of the mine.

A report has been received by the Linares Company, from Capt. Curry, on the mining operations of the past month. It is, generally, of a satisfactory character. San Antonio winze has been sunk more than 10 fms. through a large lode, producing from ½ ton to 1 ton per fm. In Wilson's shaft the lode is yielding 4 tons of lead per fm., and in Shaw's shaft the lode is producing from 2 to 3 tons per fm. There is also a promising lode in the 31 fm. level, with a leader of lead, yielding 3 tons per fm. The tribute department is described as looking well. The ore raised in Nov. was 105 tons, and the estimate for the present month is 120 tons. Ore in stock at Linares to December the 7th, 151 tons 14 cwts.; at Baylen, 39 tons 16 cwts.; at Seville, 36 tons 17 cwts.; at Malaga, 58 tons 13 cwts.; on board ship, 126 tons 10 cwts.; from which deduct 23 tons 13 cwts. sent for shipment, leaving in stock 389 tons 17 cwts.

The prospects of the Cobre Company appear to be decidedly brightening, more especially since the termination of the legal difficulties with the St. Jago Company, under which the adventurers have been labouring. The ore for some months past has been improving in quality, and consequently produces a much better price at public sale. In February last year the dividend declared was 1*l.* per share, and in July 3*l.* per share, making the total dividends in 1849, 48,000*l.* This year the amount paid in dividends is no less than 84,000*l.*, the two dividends having been at the rate of 3*l.* and 4*l.* per share respectively; and, from all the information we are enabled to gather from reliable sources, we are led to believe that the dividend in January next will be the same as that paid in the early part of the present year—viz., 3*l.* per share. The reserve fund now amounts to between 27,000*l.* and 28,000*l.*, and is to receive an augmentation of 5 per cent. from each dividend declared, until it reaches the sum of 40,000*l.*, the interest of which will then be applied to increasing the dividend. The shares are well held, and considering the improvement in the prospects of the company, and the increased amount of the dividends, the absence of movement in the shares is rather unaccountable. Their market value has undergone scarcely the least fluctuation, the price during the last three months having only varied from 32 to 33¼, and being now quoted only 34 to 35, whilst the amount paid up is 40*l.* Two cargoes (960 tons) of copper ore have arrived at Swansea during the present week consigned to this company.

Advices from Port Adelaide, under date 26th September, mention that much vigour continued to be shown in the prosecution of mining enterprise, and reports of fresh discoveries of mineral wealth, which were constantly being made, added still more to the interest felt in the subject throughout the colony. The South Australian (Burra Burra) Mining Company's usual dividend of 200 per cent. (being 10*l.* per share on its original shares of 5*l.*) was in course of payment, and the price was last quoted 210*l.* buyers. The latest quotations of the Adelaide market were—

Burra Burra, 210*l.*; Princess Royals, 21*l.*; Britannias, 2*l.*; Port Lincolns, 6*l.* 10s.; Mount Remarkable, 8*l.*; Mount Liverpool, 3*l.* 5s.; Glenalbyns, 7*l.*; Strathalbyn, 3*l.* 5s.; Wheal Barton, 5*l.*; Wheal Gawlers, 5*l.* 10s.; Wheal Margaret, 2*l.* 15s.; Wheal Friendship, 8*l.* 4s.; Wheal Emma, 2*l.* 10s.; Wheal Harmony, 2*l.* 16s.; Wheal Maria, 1*l.*; Royal Mining Company, 1*l.* 5s.; Adelaides, 1*l.* 2s.; North Kapundas, 1*l.* 6s.

The visiting directors and secretary had returned from their periodical visit to the Burra Burra Mines, and report the works in a high state of prosperity. The number of miners had increased since the previous letting, and an excellent survey had taken place. In April, a new system of working was adopted, by which encouragement is given to the miners to win the poorer ores hitherto neglected; and the produce of the last take (eight weeks) is estimated at about 5000 tons of ore, ranging from 10 to 40 per cent. This is almost double the quantity of any of the previous takes; but it must not be supposed by this that the profits of these extraordinary mines are doubled in consequence. The low ores will naturally produce a smaller profit than the rich; and, although the quantity has increased so much, the average per centage will be considerably less than usual. It is, however, supposed that the present plan of working the mine will be attended with very beneficial results. The Patent Copper Company's Works are progressing favourably. They have seven smelting and two refining furnaces in work; and their making of fine copper is about 50 tons per week.

The following are the prices obtained by the Australian Mining Company for the ores shipped by them in the *Dorothy*, 20*l.* 5s. 3d. for Tungkillo ores, and 20*l.* 15s. 6d. for Montacute ores. The machinery for connecting the stamping-works with the steam-engine at Tungkillo, and which is now being manufactured by Messrs. Wyatt, of Adelaide, will be completed in about six weeks, when the immense accumulation of low produce ores at the mine will be forthwith brought into a marketable state. Heretofore only the high produce ores have been available for shipment, owing to the expense of carriage to the port.

The *Harlequin* had on board a full cargo of South Australian copper, in ingots and tiles, which was intended for the Indian market.

HULL, THURSDAY.—Messrs. T. W. Flint and Co. state that they have again had a firm and well-supported market for mining shares, although the buying has, perhaps, not been of so extensive a character as last week. Tremaynes, Wellingtons, and Bedfords have been most in request at 21¼*l.*, 16¾*l.*, and 6¼*l.* respectively. Trefusis, West Tolgus, and Gustavus, formerly active stocks, have assumed a more passive character, although small bargains continue to be done in them. For Lewis there is a good inquiry. Merllyns, which have been dealt in to some extent, would also find buyers at a slight decline. South Tamars are rather better since the report. West Providence would meet ready buyers, and several other mines would be taken at market prices.—The railway market has been very strong, although a reaction from highest prices has taken place.

SILVER-LEAD ORE

Sold at the Mine, on the 14th of December.

Mine.	Tons	Price.	Purchasers.
Trehane	55	£23 3 6	Tamar Smelting Co.
Tamar	86	29 2 6	ditto

Sold in London.

Holmbush	30	£24 18 6	Sims, Willyams, & Co.

LEAD ORES.

TICKETINGS FOR ABOUT 160 TONS FOXDALE LEAD ORE.

Douglas Isle of Man, December 14.

Bidders.	Price per Ton.
Walker, Parker, and Co.—Dee Bank (purchasers)	£12 4 6
J. H. Meredith (trustee of the late J. T. Treffry, Fowey Con.)	9 11 6
Tamar Smelting Company—Beeralston	10 15 0
Thomas Somers—Bristol	10 10 0
Sims, Willyams, Nevill, and Co.—Llanelly	11 9 0
Mather and Co.—Bagillt	11 15 0
Newton, Keates, and Co.—Bagillt	11 18 0
Locke, Blackett, and Co.—Newcastle	11 0 0

Sold at the Mine.

Mines.	Tons.	Price per Ton.	Purchasers.
Great Wheal Baddern	51	£13 13 6	Michell & Co.
ditto	11	13 15 6	Sims, Willyams, & Co.
North Wheal Friendship	14½	11 3 0	Tamar Smelting Co.

Sold at Bagillt on the 18th December.

Cwm Erfin	33	£14 13 6	Walker, Parker, & Co.

BLACK TIN.

Sold on the Mine on the 6th of December, 1850.

Mines.	Cwts. qr. lbs.	Price per ton.	Amount.
Great Beam	27 1 12	£60 0 0	£82 1 5
Ditto	23 1 20	58 0 0	67 18 10
Ditto	17 0 20	53 10 0	45 19 0
Ditto	23 3 26	51 10 0	61 15 1
Ditto	18 2 7	46 10 0	43 3 1
Ditto	5 2 23	46 0 0	13 2 5
Ditto	1 2 21	43 0 0	3 12 7

Total, 117 cwts. 3 qrs. 17 lbs.; amount, 317*l.* 12s. 5d.

Mines.	Tons c. qr. lbs.	Price per Ton.	Purchasers.
Mineral Court	4 10 3 10	£57 0 0	Calenick Smelting Co.
ditto	0 5 1 15	27 15 0	ditto
ditto	0 9 1 13	56 0 0	ditto
ditto	0 5 3 11	16 0 0	ditto
Wheal Friendship	2 5 0 0	45 10 0	Calenick Co. & Williams.
ditto	0 14 0 0	33 0 0	Calenick Co.
Birch Tor	3 0 0 0	49 10 0	Union Smelting Co.
Tincroft	14 0 0 0	41 0 0	Calenick Co. & Bissoe Co.

COPPER ORES

Sampled Dec. 4, and Sold at Andrew's Hotel, Redruth, Dec. 19.

Mines.	Tons.	Price.
Devon Gt. Cons.	103	£5 15 6
Wh. Josiah		
ditto	97	6 15 6
ditto	94	7 9 0
ditto	88	7 5 6
ditto	87	5 14 0
ditto	83	6 11 6
ditto	74	7 17 6
ditto	73	5 0 6
ditto	71	11 12 0
ditto	56	7 3 0
Wh. Fanny	95	5 18 6
ditto	91	6 13 0
ditto	86	4 4 6
ditto	70	5 0 0
ditto	43	6 10 6
Wh. Maria	69	5 6 6
ditto	65	9 7 6
Wh. Anna Maria	99	5 4 6
ditto	85	5 17 0
ditto	72	4 3 6
West Caradon	94	6 15 0
ditto	50	9 5 0
West Caradon	47	£9 3 6
ditto	44	4 0 6
ditto	36	15 0 6
ditto	35	17 3 6
ditto	30	9 1 6
Marke Valley	101	3 7 0
ditto	90	3 10 0
ditto	87	3 12 0
ditto	30	3 2 6
ditto	26	2 5 6
Fowey Consols	99	6 0 6
ditto	84	4 15 0
ditto	63	6 4 0
Wh. Friendship	101	8 1 0
ditto	100	8 0 6
Holmbush	70	8 18 0
ditto	60	5 7 0
ditto	34	3 12 0
Phœnix Mines	89	15 3 6
ditto	64	6 7 0
Bedford United	122	6 1 6
Wheal Pink	22	4 11 0
Pembroke	2	2 13 6

TOTAL PRODUCE.

Devon Gt. Cons. Wh. Josiah, Wh. Maria, Wh. Fanny, Wh. Anna Maria	1601	£10261	11 6	Fowey Consols	237	£1331 17 0
				Wh. Friendship	201	1615 11 0
				Holmbush	164	1066 8 0
				Phœnix Mines	153	1756 19 6
				Bedford United	122	741 3 0
West Caradon	336	3119	12 0	Wheal Pink	22	100 2 0
Marke Valley	334	1119	9 0	Pembroke	2	5 7 0

Average Standard ..... £97 13 0 | Average Produce 9¼

Average Price per ton £6 13 0

Quantity of Ore ..... 3172 tons | Quantity of Fine Copper, 365 tons 10 cwts.

Amount of Money £21,118 0 0

LAST SALE.—Average Standard ..... £102 6 0.—Average Produce 8

Standard of corresponding sale last month, 96*l.* 3s.—Produce, 9¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	553	£3546 2 1
Vivian and Sons	520	4053 6 10
Freeman and Co.	394	2241 19 3
Greenfell and Sons	407	2268 16 0
Crown Company	80	851 8 10
Sims, Willyams, and Co.	389	2578 4 4
Williams, Foster, and Co.	564	4347 13 2
Schneider and Co.	265	1230 9 6
Total tons	3172	£21,118 0 0

Messrs. Mason and Elkington gave notice at the Ticketing this day, of their intention to commence offering at the future ticketings from the 2d January next, for all copper ore that may be offered for sale in Cornwall as No. 9, the Burryport Company, Llanelly; Mr. C. B. Bone, is to be the cashier.

Copper ores for sale, on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—United Mines 757—Treswean 410—Par Consols 314—South Caradon 225—South Tolgus 205—Wheal Comfort 180—Treleigh Consols 114—Wheal Mary (Redruth) 100—West Wheal Jewel 59—West Trethellan 14—Richards's ore 14—Resprya 6.—2398 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Tincroft 707—North Roskear 653—North Pool 513—Consolidated Mines 428—Wheal Basset 401—Wheal Seton 367—South Wheal Frances 231—Fowey Consols 220—Copper Bottom 26.—Total quantity of ore to be sold, 3546 tons.

SWANSEA.—There will be no sale till Tuesday, the 31st of December.

MINING APPOINTMENTS DURING THE WEEK.

21. Pay at Great Consols, Comfort, Treviskey, Seton, Agar, Pendarves, and Fowey Consols; setting at Levant Mine.
23. Par Consols sampling.
24. Carn Brea and other mines sampling.
26. Ticketing at Redruth, United, and other mines.
27. Pay at North Pool, South Tolgus, Tincroft, Ellen, Treleigh; setting at East Crofty
28. Pay at Tresavean, Trethellan, Grambler, Mary, Condurrow, West Seton, North Roskear, Tywarnhayle, and South Frances.
31. North Pool account, on the mine.

ACCIDENTS.

Great Polgooth Mine.—As Joseph Nankivell was at work underground, a rock fell away and cut him about the head, but we are happy to say he is in a fair way of recovery.

Whitehaven.—W. Metcalfe had his thigh broken at Ingleton Colliery.—A. Cochrane was killed by a stone falling down the Bransty Quarry.

Seaton Delaval.—C. Rutherford was killed by a fall of stone in the E. F. pit.

Oldbury.—M. Neary was killed by a fall of coal at Capt. Bennitt's Rowlway Colliery.

Bilston.—T. Roberts was killed at the Bullholes Colliery: he was hanging on a skip at the bottom of the shaft—a brick fell from above, struck him on the head, and killed him.

Merthyr.—David Charles was killed by a fall of coal in one of the Plymouth coal-pits.

Glasgow.—G. Young was killed by a fall of roof in the Carolina pit.

Burnstounness.—Three colliers, C. Robertson, his son J. Robertson, and R. Robertson, a nephew, were suffocated by choke-damp at the School-yard Pit. They were employed in opening up the roads in some old workings; and the accident is ascribed to the current of air having been changed, thus bringing the choke-damp from the waste to where they were working.

Aberdare.—The loss of life by this lamentable explosion, noticed by us last week, is ascertained to be greater than was at first stated—four colliers having died of the injuries they received, while a great number of men were severely wounded; two men were killed by a fall of rubbish, and a boy received a concussion of the brain. The sides of the shafts were blown in by the force of the explosion. The inquest is to be held on Thursday next.

Durham.—At the Crow Trees Colliery, two enginemen were killed by the bursting of one of the three boilers at the colliery, the other two being torn from the masonry by the violence of the explosion. The boilers had been examined by the Government Inspector an hour previously, and pronounced safe. Intelligence of the explosion has, in accordance with the Act, been communicated to the Home Secretary.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars	per oz. £3 17 0	New dollars	per oz. £0 4 11½
" Portugal pieces	0 0 0	Silver in bars (standard)	0 5 1½

PRICES OF MINING SHARES.

*** As it is exceedingly difficult to obtain a correct knowledge of all the mines in our list in London, we trust the agents, and others interested, will assist us, by forwarding any corrections with which they may be acquainted—our object being to present as perfect a list as can be procured.

BRITISH MINES.

Shares.	Company	Paid.	Price.
5120	Alfred Consols (copper), Hayle, Cornwall	2½	19 20
1248	Allt-y-Crib (silver-lead), Talybont, Cardiganshire	5	10
1624	Balleswidden (tin), St. Just, Cornwall	9	10 10½
940	Balnoon Consols (tin), Uny Lelant, Cornwall	6	6
905	Barristown (lead), Carrick, Ireland	5½	—
3650	Bawden (silver-lead), Cornwall	7s	¼ ¼
4000	Bedford United (copper), Tavistock, Devon	2½	6½ 6¾ 6¾
1280	Birch Tor and Vitifer (tin), Dartmoor, Devon	10½	4
1500	Bishopstone (silver-lead), Glamorganshire	2½	10
5000	Black Craig (lead), Kirkcudbrightshire	5	5
8000	Blaenavon (iron), South Wales	50	12½
1024	Bodmin Consols (lead), Wadebridge, Cornwall	4	4
8000	Bodmin Moor Consols (tin and copper), Bodmin, Cornwall	1	3½
—	Bodmin Wheal Mary (tin)	5	6½
40	Bolowali and Nanpean (tin), St. Just, Cornwall	—	16
1024	Borrington Park (silver-lead), Plympton, Devonshire	½	3½
128	Boscean (tin), St. Just, Cornwall	10	10
60	Bosorn (tin), St. Just, Cornwall	4½	6
100	Botallack (tin and copper), St. Just, Cornwall	182	200
1500	Bridford Wheal Augusta (lead), Bridford, Devon	½	—
10000	British Iron, New, regis. (iron), South Wales	12	8
—	Ditto ditto, scrip	10	10
2400	Bryn-Arian (lead), Cardiganshire	2	2 2½
1000	Bryntail	2½	11½
107	Buduick Consols (tin), Perranzabuloe, Cornwall	52½	10 11½
406	Butterdon (lead), Menheniott, Cornwall	1½	8
2000	Bwlch Consols (silver-lead), Cardiganshire	4	4½
1000	Cae-Gynon (silver-lead), Cardiganshire	½	1½
1000	Callington (lead and copper), Callington, Cornwall	26	6½
4000	Calstock United (copper)	5	5
1000	Camborne Consols (copper), Camborne, Cornwall	7	7¾
20000	Cameron's Steam Coal (coal), Swansea, Wales	10	2 2½
1168	Caradon Great Cons. Mines (copper), Linkinhorne, Corn.	7	3
1536	Caradon Vale (copper and lead), St. Ive, Cornwall	1½	1½ 1¾
1000	Carbona (tin and copper), Crowan, near Camborne	5	10
1000	Carn Brea (copper and tin), Illogan, Cornwall	18	120
3000	Carthew Consols (cop. & lead), near Wadebridge, Cornwall	4	7
1056	Carvannell (copper), Gwennap, Cornwall	21¾	60 68
200	Cefn Bruno (lead), Cardiganshire	6	40 50
500	Comblawn (lead), Callington, Cornwall	5¾	4¾
128	Comfort (copper), Gwennap, Cornwall	45	100
256	Condurrow (copper and tin), Camborne, Cornwall	20	115
2560	Cook's Kitchen (copper and tin), Illogan, Cornwall	14	8 9 10
1000	Coombe Valley Quarry (slate), St. Ginnis, Cornwall	5	2
1000	Copper Bottom (copper), Crowan, Cornwall	10¾	10 11
900	Court Grange (silver-lead), Cardiganshire	10	12
211	Craddock Moor (copper), St. Cleer, Cornwall	28	7¾
1600	Craig-y-Mwyn (lead), Llanrhiadr, Montgomeryshire	8	10
256	Crane and Bejawsa (copper), Camborne	8	2
1000	Cwm Erfin (lead), Cardiganshire	6	6¼ 7
2000	Cwm Sebon	—	4
128	Cwmystwith (lead), Cardiganshire	60	100
1000	Daren (silver-lead), Cardiganshire	2	8¼
7100	Derwent (silver-lead), Durham	10	3
1040	Devon and Courtenay Consols (copper), near Tavistock	6	1 1½
1024	Devon Great Consols (copper), near Tavistock	1	245 250
1000	Dhurode (copper), Ireland	2	5
180	Dolcoath (copper and tin), Camborne	252	18 20
2560	Drake Walls (tin and copper), Calstock, Cornwall	6¼	2½ 3
10000	Durham County Coal (coal), Durham	45	9
3000	Dyfingwm (lead), North Wales	10	3 4
1024	East Balleswidden (tin), Sancreed, Cornwall	¾	1½ 1¾
2500	East Birch Tor (tin), North Bovey, near Ashburton	3	3
1024	East Buller (copper), near Redruth, Cornwall	2	6¾
128	East Carn Brea (copper), Redruth, Cornwall	1	3
2048	East Crowndale (tin), Tavistock	7¾	14
150	East Daren (lead), Cardiganshire	17	53 55
256	East Godolphin (copper), Crowan, Cornwall	13¾	13
4000	East Gunnis Lake Junction (copper), Gunnis Lake	¼	1½
1024	East Polgooth (tin), Cornwall	6	7¾
128	East Pool (tin and copper), Pool, Illogan, Cornwall	24¾	150
256	East Seton and Wheal Maude, near Redruth, Cornwall	—	4¾
1024	East Sharp Tor (copper), Cornwall	—	8
9000	East Tamar Consols (silver-lead), Beer Ferris, Devon	1¾	1¾
256	East Tolgus (copper), Redruth, Cornwall	1¾	15 17¾ 20
1000	East Trescoll (tin), Lanivet, near Bodmin, Cornwall	1	2 2½
128	East Tywarnhayle (copper), St. Agnes, Cornwall	1	7
94	East Wheal Crofty (copper), Illogan, Cornwall	125	250
256	East Wheal Frances, Illogan	2½	5 5½ 6
2048	East Wheal George (copper)	1	10
512	East Wheal Josiah (copper), near Tavistock	1¾	2
512	East Wheal Leisure (copper), Perranzabuloe	3	33 35
1000	East Wheal Reeth	¾	1¼
128	East Wheal Rose (silver-lead), Newlyn, Cornwall	50	600 650
4000	East Wheal Russell (copper), Tavistock	¼	6 8
1280	Esgair Llee (lead), Llanfihangel-y-Croythin, Cardigan	2	3¾ 4
248	Exmoor Wheal Eliza (copper), South Molton, Devon	11	10
494	Fowey Consols (copper), Tywardreath, Cornwall	40	30
1024	Freidd Llwydd Mines (lead), Wales	1½	3¾
256	Garras (lead), near Truro	43	23
1000	Gelli-rei-vin (silver-lead), Cardiganshire	1	5
4000	General Mining Company for Ireland (copper), Ireland	1¾	4
100	Goginan (lead), Cardiganshire	5	200
256	Gonamena (copper), St. Cleer, Cornwall	46	15
2500	Georgia Consols (tin), St. Ive's, Cornwall	2¾	7 7¾
256	Grambler and St. Aubyn (copper), Redruth, Cornwall	80	45 50
96	Great Consols (copper), Gwennap, Cornwall	1000	250
512	Great Wheal Baddern (tin and silver-lead), Kea, Cornwall	20	100
1024	Great Sheba Consols (tin and copper), Stoke Climsland	2	4 4¾
3072	Great Wheal Mitchell Consolidated, Lanivet	—	5
512	Gt. Wh. Rough Tor Consols (copper), near Camelford	29	20
6000	Growa Slate Company, Camelford, Cornwall	5	5
1026	Gustavus Mines (copper), Camborne	4	6 7
512	Hawke's Point (copper), Uny Lelant, Cornwall	5¼	6¾
1024	Hawkmoor (copper), Calstock, Gunnis Lake	5	17
6000	Helgunton Down Consols (copper), Calstock, Cornwall	2¼	2 3
1500	Hennock (silver-lead), Hennock, near Exeter, Devon	2¾	3¼ 3½
512	Herodsfoot (lead), near Liskeard	16	14 15
10000	Hibernian (copper), Ireland	12¼	1¾
1000	Holmbush (lead and copper), Callington	23	20
1900	Keswick (lead), Portinscale, near Keswick	11	2 3
1024	Kingsett & Bedford (lead & copper), St. Mary Tavy, Devon	3¾	3
787	Kirkcudbrightshire (lead), Kirkcudbrightshire, Scotland	8¼	5¼ 5¾
1744	Lamberooe Wheal Maria (copper and tin), Lamerton	11	12
252	Lanarth Consols (copper), Gwennap, Cornwall	—	8¼ 9
256	Lelant Consols (tin), Uny Lelant, Cornwall	53	20 21 22
160	Levant (copper and tin), St. Just, Cornwall	—	175
1000	Lewis (tin and copper), St. Erth, Cornwall	17	21
100	Lisburne (lead), Cardiganshire	75	600
1000	Llwynmalees (lead), Cardiganshire	9¼	8 9
3500	Llynvi Iron (iron), North Wales	50	50
5000	Low's Patent Copper Company	7	7
6000	Marke Valley (copper), Caradon, Cornwall	10	¾ 1
5000	Mendip Hills (lead), near Bristol	3¾	1½ 1¾
5000	Merllyn (lead), Flint	2¾	5¼ 5¾
128	Metha (lead) Newlyn, Cornwall	34	—
1024	Mill Pool (tin and copper), St. Hilary and Germoe, Corn.	¾	4¼
256	Mineral Court (tin), St. Stephens, near St. Austell	22¼	40
20000	Mining Co. of Ireland (copper, &c.), Waterford, Ireland	7	5¾ ¼
1024	Moditonham & Marrabro' (copper & lead), Botes-fleming	1¾	2¼ 3
1024	Montgomery (lead and copper), Montgomeryshire	6	11½ 12
320	Nansegollan (tin and copper), Camborne	1	2
200	Nanteos (lead), Cardiganshire	34	25
3000	Nant-y-Car (copper), near Rhayader, Breconshire	—	5 5¼
1024	New East Crowndale (copper and tin), Tavistock	2	2
6000	North Wheal Basset (copper and tin), Illogan, Cornwall	—	25
1024	North Buller (copper), Redruth, Cornwall	3	10 12
1200	North Wh. Buller, or Gt. South Tolgus (copper), Redruth	5	7
5000	North Levant (tin and copper), St. Just, Cornwall	—	3
100	North Pool (copper and tin), Pool, Cornwall	45	420
140	North Roskear (copper), Camborne, Cornwall	5¼	160
256	North Tolgus (copper), Redruth, Cornwall	2¼	14
256	North Trefusis (tin and copper), Redruth	1	2
262	North Wheal Leisure, Perranzabuloe, Cornwall	1¾	1¾
1024	North Wheal Robert (copper), Walkhampton, Devonsh.	2	2
512	North Wheal Vor (tin), Breage, near Helston, Cornwall	—	5
128	Par Consols (copper), St. Blazey, Cornwall	55¾	650
1026	Pendarves Consols (copper), Camborne, Cornwall	2¼	6¼ 6¾
1000	Pendarves and St. Aubyn (copper), Camborne, Cornwall	5	12
4934	Pennant and Craigwen (lead), Wales	3	3
2048	Pentire Glaze, United (silver-lead), St. Minver, Cornwall	5	9
1000	Pen-y-bank and Erglodd (lead), Cardiganshire	4	6
1160	Perran St. George (copper and tin), Perranzabuloe	22¾	25
1024	Penzance Consols (tin, Sancreed, Cornwall	22s 3d	1¾ 1¾ 2
1000	Peter Tavy and Mary Tavy (copper), Tavistock, Devon	2¼	10 12
512	Plymouth Wheal Yeoland (tin), Plymouth, Devonshire	6¼	6
1000	Polberrou (tin), St. Agnes, Cornwall	¼	—
1000	Ditto Preferential	15	—
512	Praed Consols	1	1¼
560	Providence Mines (tin), Uny Lelant, Cornwall	—	30
2500	Rhoswydol and Bacheiddon (lead), North Wales	10	—
10000	Rhymney Iron (iron), Rhymney, South Wales	50	12
10000	Ditto New	7	3
5000	Roche Rock (tin), Roche, near St. Austell	1	1
5000	Rocks Mine (tin), Roche, near St. Austell	5	6 7
2048	Runnaford Coombe (tin), Devon	2¾	3¼ 4
2048	Snowdon (copper), Carnarvonshire, Wales	3	—
256	South Caradon (copper), St. Cleer, Cornwall	5	200
2000	South Carn Brea (copper), Illogan, Cornwall	10	—
1100	South Dolcoath (copper), Illogan, Cornwall	6	3 4
256	South Friendship Wheal Ann (copper & tin), Devonshire	30	28 30
256	South Molton (lead), Devonshire	12½	12½
1024	South Plain Wood (copper), Ashburton, Devon	2¾	6 7

BRITISH MINES—*Continued.*

Shares.	Company.	Paid.	Price.
300	South Speed (copper and tin), Uny Lelant, Cornwall	15	30
9000	South Tamar (silver-lead), Beer Ferris, Devon	1	2½ 2¾
256	South Tolgus (copper), Redruth Cornwall	16	155
256	South Trelawny (lead), near Liskeard, Cornwall	31	6½
2000	South Wales Mining Company (lead), South Wales	1	1
256	South Wheal Basset (copper), Illogan, Cornwall	10½	325
124	South Wheal Frances (copper), Illogan, Cornwall	75½	640
256	South Wheal Josiah (copper), Calstock, Cornwall	2	3½ 4
280	Spearne Moor (copper) St. Just, Cornwall	30	40
128	Spearne Consols (tin), St. Just, Cornwall	10	60 61
1024	St. Aubyn and Grylls (copper and tin), Breage, Corn.	2½	5 5½
94	St. Ives Consols (tin), St. Ive's, Cornwall	—	80
999	St. Mawer Consols (silver-lead), Cornwall	1	6
1000	Stray Park (copper), Camborne, Cornwall	10½	21
9600	Tamar Consols (silver-lead), Beeralston, Devon	4	5½
687	Tavy Consols (copper), near Tavistock	8	4
4000	Tyn-y-Worglod (slate), near Carnarvon, North Wales	4	4 5
6000	Tincroft (copper and tin), near Pool, Cornwall	7	11½ 12
128	Tokenbury (copper), St. Ive, near Liskeard	7½	8
1300	Tolcarne (tin and copper), Camborne, Cornwall	8	5
1024	Trannack and Bosence, St. Erth	1	14 15
1024	Trannack United Mines (tin and copper), Helston, Corn.	1½	4½
2048	Trebell Consols (tin and copper), Lianivet, near Bodmin	1½	1½
512	Troburget United (lead), St. Teath, Cornwall	—	—
—	Tregardock	1	5
5000	Tregear Consols (antimony and silver-lead), St. Kew	1	2 2½
256	Tregorden (silver-lead) Wadebridge, Cornwall	10	9 10
256	Trehane (silver-lead), Menheniot	1	15
5000	Treleigh Consols (copper), Redruth	6	2½
1024	Treluswack, Stithiana, Cornwall	—	5
150	Trelyon Consols (tin), St. Ive's, Cornwall	7½	25
2000	Trenance (copper), Helston, Cornwall	6	7 8½
1500	Trenault (lime quarries)	2½	3½ 4
96	Tresavean (copper), Gwennap	10	180 200
120	Trethellan (copper), Gwennap	5	18
120	Treviskey and Barrier (copper), Gwennap, near Redruth	130	280 285
512	Trethery (copper), St. Cleer, Cornwall	7	5
512	Treville (lead), Lewanick	1½	6 7
604	Trowan Consols (tin), Towednack, Cornwall	7	10
100	Trumpet Consols (tin), near Helston, Cornwall	95	80 90
1000	Tyllwyd (lead), Cardiganshire	2	2½
500	Tywarnhayle (copper), Illogan and St. Agnes	60	47½
200	United Mines (copper), Gwennap	300	130
5000	Warleggan Consols (copper), Cornwall	¼	¼
1024	Wellington Mines (copper and tin), Perranuthnoe, Corn.	6½	16½ 17½
1024	West Alfred Consols	5	11½ 12
128	West Buller (copper), Redruth, Cornwall	10	750
256	West Caradon (copper), Liskeard	20	95 97½
128	West Ding-Dong	2	8
1024	West Downs (copper and tin), Whitchurch, Devon	2	2½
512	West Fowey Consols (tin and copper), St. Blazey	40	60
2048	West Goginan (silver-lead), Cardiganshire	1½	1½ 2
1020	West Nantymwyn	—	2
1024	West Par Consols (copper), St. Blazey, Cornwall	10	11
2500	West Polgooth (tin), St. Ewe and St. Mewan, Cornwall	5	7
512	West Providence (tin), St. Erth, Cornwall	10	55 62½ 65
200	West Seton (copper), Camborne, Cornwall	45	180
940	West Tolgus (copper), Illogan, Cornwall	12½	9 10
120	West Trethellan (copper), Gwennap, Cornwall	5	20
512	West Wheal Frances (copper), Illogan, Cornwall	5½	14 14½
1024	West Wheal Friendship (copper), Devon	3	3 4
3845	West Wheal Jewel (tin and copper), St. Day, Cornwall	12	2½
2048	West Wheal Rose (lead), Cornwall	2½	3
500	West Wheal Towan (copper), Illogan, Cornwall	9	14 15
1024	West Wheal Treasury (copper), Gwinear, Cornwall	6½	4
1024	West Wheal Virgin (tin), Sancreed, Cornwall	½	2 2½
1024	Weston (lead)	½	½
5200	Wicklow (copper), Wicklow, Ireland	5	17½
5000	Wicklow (copper and sulphur), Wicklow, Ireland	3	3½ 3¾
1070	Wheal Adams (lead), Christow, Exeter	13½	16
1000	Wheal Agar (copper), Illogan, Cornwall	—	5 6
256	Wheal Albert (copper), Cornwall	10	28 29
300	Wheal Arthur (lead), near East Wheal Rose, Cornwall	17	50
2048	Wheal Arthur, Calstock	2	2
3072	Wheal Augusta (tin), St. Just, Cornwall	½	2½ 3
120	Wheal Bal (tin), St. Just, Cornwall	10	14
256	Wheal Benny (copper), Calstock, Cornwall	19½	5
1024	Wheal Bray (copper), Alternun, Cornwall	11½	—
232½	Wheal Calstock (copper), Calstock, Cornwall	9	10
256	Wheal Carpenter (tin and copper), Gwinear, Cornwall	½	4½
268	Wheal Courtenay (copper), Cornwall	20	23
1024	Wheal Crebor (copper), Tavistock, Devon	1½	3
500	Wheal Daniell (copper), Chacewater	5	—
182	Wheal Elizabeth (copper), Redruth, Cornwall	9	52½
1024	Wheal Emily (lead and antimony), near Plymouth	3	5½ 6½
1024	Wheal Fortescue (copper), near Tavistock, Devon	4½	6½
764	Wheal Franco (copper), near Tavistock, Devon	27	10
100	Wheal Friendly (tin), St. Agnes, Cornwall	70	65
128	Wheal Friendship (copper), Devon	—	120
1000	Wheal Guskis (tin and copper), St. Hillary, Cornwall	½	3
4000	Wheal Golden (lead), Peranzabuloe, Cornwall	2	5 6
1000	Wheal Grose (silver-lead, copper, &c.), near Wadebridge	¼	—
1000	Wheal-an-Grose (tin), St. Columb Major, Cornwall	5	5 6
2560	Wheal Harriet (copper), Camborne, Cornwall	1	5 6
1024	Wheal Hamlyn, near Oakhampton, Devon	½	1 1½
2048	Wheal Harris (lead), near Tavistock	½	1½ 2
216	Wheal Henry (copper), Kea, near Truro, Cornwall	—	8 12
256	Wheal Kingston (copper and silver-lead), Stoke Climsland	½	1½
6000	Wheal Langford (copper and silver-lead), Callington	½	2 2½
2000	Wheal Langmaid (lead), Devon	½	1 1½
112	Wheal Margaret (tin), Uny Lelant, near Hayle	79	155
1024	Wheal May (silver-lead and copper), Botes-fleming	1½	1½
990	Wheal Mary (copper), Redruth, Cornwall	14½	7½
512	Wheal Mary Ann (lead), Menheniot	5	64 66
1024	Wheal Neptune (copper), Perranuthnoe, Cornwall	1	2
1080	Wheal Oak, near Helston, Cornwall	1½	1½
3000	Wheal Penhale (lead and copper), Cornwall	2½	6
128	Wheal Plenty (copper), Redruth, Cornwall	19	38 39
128	Wheal Pollard (copper), St. Cleer, Cornwall	15½	—
210	Wheal Prospect	4	7
5000	Wheal Providence, South Sydenham, Devon	½	2 4
120	Wheal Reeth (tin), St. Ive's, Cornwall	41	150
1024	Wheal Russell (copper), Tavistock	4	4 4½
512	Wheal Selena (copper), Redruth	½	1½
194	Wheal Seton (copper), Camborne, Cornwall	107	235 240
1056	Wheal Sarah (silver-lead), St. Kew, Cornwall	5	6
512	Wheal Sophia (silver-lead), Lezant, Cornwall	6½	7
512	Wheal Spry (copper and lead), St. Columb Miner	½	1
128	Wheal Squire (copper), St. Erth, Cornwall	—	5
1000	Wheal Susan, Breage and Crowan, Cornwall	1	3½
512	Wheal Trefusis (copper), Gwennap, Cornwall	6½	20½ 21
1100	Wheal Tresooll (tin), Lanivet, near Bodmin, Cornwall	6½	6
520	Wheal Trelawny (silver-lead), near Liskeard, Cornwall	3½	45 47½ 50
256	Wheal Tremaine (copper), St. Ervan, Cornwall	11	34
1024	Wheal Tremayne (tin and copper), Gwinear, near Hayle	11	20½ 21½ 22½
267	Wheal Tryphena (tin and copper), Camborne, Cornwall	40	30
126	Wheal Union (copper), Redruth, Cornwall	—	38 40
1024	Wheal Venton (silver-lead), Liskeard, Cornwall	3½	9 10
1000	Wheal Vincent (tin), Alternun, Cornwall	6½	4 5
128	Wheal Violet (tin and copper), St. Stephens, St. Austell	5	2½
128	Wheal Vlow, Perranzabuloe	3	5
184	Wheal Vyvyan (copper and tin), Constantine, Cornwall	—	66

FOREIGN MINES.

5000	Alten Mining Company (copper), Norway	14½	3
12000	Annotto Bay Mining Association, Jamaica	1	—
15000	Asturian Mining Company (coal, iron, &c.), Spain	15	—
20000	Australian (copper), South Australia	4	3½ ¾
6000	Barossa Range (copper), South Australia	1½	¾
10000	Brazilian Imperial (gold), Brazil	23	4½ 5
12000	Cobre Copper Company (copper), Cuba	40	34 35
10000	Copiapo Mining Company (copper), Chili	14	5
20000	General Mining Association (iron & coal), Nova Scotia	20	13½
5000	Kinzigthal Mining Association (silver), Germany	2	½
5000	Linares (lead), Spain	3	2 2½
4500	Ditto New	3	3
5051	Mexican Company (silver), Mexico	39½	—
20000	Mexican and South American (silver), Mexico	8	1 1½
5000	National Brazilian (gold), Brazil	30	3
104000	North British Australasian (copper), S. A. & New Zea.	1	¾ ⅞
7000	Royal Santiago (copper), Cuba	10	7½
11000	St. John del Rey (gold), Brazil	15	14½ 14¾
43174	United Mexican (silver), Mexico Av.	28½	5½
10000	Worthing (copper), Adelaide, South Australia	2	2½ 2¾ 3

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of Nov. is 27—the quantity of coals consumed being 2323 tons, lifting, in the aggregate, 21,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 52,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal.—The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch on pist.	Strokes per min.	Consump. of coal, in bus.	Millions lifted 1 foot by consump. of 1 bush. coal	Lifted 1 foot by 1c. of coal.
Great Work	Leed's 60-in.	9·0	55,343	15·2	6·4	2150	58·7	70
East W. Crofty	Trevenson's 80	10·33	82,333	12·2	4·5	3548	57·0	68
Poldice	Sims's 85-inch	10·33	84,742	10·4	6·6	3528	58·1	69
S. Wh. Frances	75-in.	11·0	58,192	10·7	3·4	1752	52·0	62
United Mines	Taylor's 85-in.	11·0	98,797	15·8	5·2	4150	63·0	75
Ditto	Cardoza's 90-in.	9·0	100,682	13·8	5·6	4029	56·3	67
Ditto	Eldon's 30-inch	9·0	13,631	16·0	8·6	695	64·5	77
Ditto	Loam's 85-inch	10·0	87,947	11·6	6·0	3562	56·6	67
Ditto	Hocking's 85-in.	10·0	97,817	14·4	5·9	4434	55·7	66
Tywarshayle	Gardiner's 80-in	10·0	77,030	12·2	7·3	4056	56·6	67
East Wh. Rose	Penrose 70-in.	10·0	81,023	18·9	4·1	2790	55·1	66

NOTICES TO CORRESPONDENTS.

In the "MINING JOURNAL" of the 4th of JANUARY, 1851, will appear the commencement of a SERIES OF PAPERS, to be continued weekly, detailing

The History of Mining,

ITS RISE AND PROGRESS:

together with NOTICES of the EARLY METHODS OF WORKING; ANCIENT and MODERN INVENTIONS, with their subsequent IMPROVEMENTS; comprising also

A SKETCH OF METALLURGICAL OPERATIONS,

from the EARLIEST PERIOD to the PRESENT TIME.

The Great Exhibition.

In the "MINING JOURNAL" will also be given a detailed description, with all necessary illustrations, of every object connected with MINING and ENGINEERING, which may be produced at the forthcoming Great Exhibition.

The Compendium of British Mining,

BY J. Y. WATSON, ESQ., F.G.S.

We have the pleasure to announce, that Mr. WATSON has consented to revise and correct, to the present time, his interesting EPITOME OF BRITISH MINES, for republication in our Journal, and that the first portion will appear on the 4th January next. In the "Compendium of British Mining," it will be remembered, the actual position of the different mines is accurately described, both as to capital and working.

At the end of each year, a copious Index is published, which renders the volume an interesting and valuable record.

"A Miner."—The disc engine, as erected at West Polgooth Mine, we are informed by Mr. Richardson, worked very easy, consuming but little steam, and making 50 revolutions per minute; but as it had no load on it to test its duty, nothing positive as to its future capabilities can be fairly stated. There are three of the same engines working at Messrs. Dickinson's Paper-mills, near London, which have had a three years' test; they do their duty well, and are considered to effect a saving of 15 per cent. over the best constructed beam-engines. The splendid new disc engine at the *Times* Printing-office, used to actuate the cylindrical printing-machines, is a sufficient example of what that class of engines can do—the one in question run for six months night and day, without having the cylinder cover off to adjust the packing. It has now been going nearly two years without intermission, and if anything can be said of it, it is better than when first put up. Mr. Marshall, M.P., has one on his estate, at Patrington, near Hull, used as a direct pumping-engine, which throws up 12 tons of water per minute; there are no valves, the stream is not intermittent, consequently its effect is very economical, the lode being always on the steam. The best persons to apply to for information are—Messrs. J. Whitworth and Co., engineers, Manchester, or to Messrs. Donkin and Co., Bermondsey, London.

"J." (City) is not the only one who underrates the difficulties attending the weekly correction of the Share List. Had he to deal with the not unfrequently conflicting quotations forwarded to us, he would be fully aware that it is impossible to satisfy all parties interested, or even in many cases to ensure absolute correctness by any amount of pains we can bestow. Doubtless, much of the difficulty arises from the want of any authorised list—a deficiency, ere long, we trust to be remedied—so that, in fact, the quotation most objected to is probably capable of being justified by some positive transaction, however unfairly it may ordinarily represent the current price of shares in a particular mine. A little reflection would cause some of our correspondents to be, if not less critical, more candid in the construction they put on the variations complained of.

"A Miner" (Stirling).—The Biram miner's lamp emits light fully equal to a naked candle, or fourfold that of the Davy lamp, and at a cost in oil of less than one-half that of candles.

"A New Speculator" (Oxford).—Scarcely a week elapses without our recommending the utmost caution being observed, previous to embarking in mining speculations. Apply to some respectable broker, who will advise as to the best course to be pursued. We fear you are in bad hands.

"Inventor" is referred to the articles which have appeared in the Journal on Patent Law Reform, from which he will learn not only what has been done, but what is proposed to be accomplished. By the third resolution, adopted at the meeting last week, "demanding that the Government should carry out a sufficient reform in time for the Great Exhibition," he will perceive that the point he discusses is not lost sight of; but, on the contrary, likely to be pressed strongly on the attention of the Government. He may be, we think, assured that some official course will be adopted to guard the rights and interests of those who are about to display the results of their inventive talents and skill at the Great Exhibition. So obviously just is this demand, that the Government, however slow to depart from the track of routine, will be unable to refuse a compliance, especially when it is announced that many foreign manufacturers have resolved not to forward articles to the Exhibition, unless they have some guarantee against their being copied by unprincipled persons.

"R."—Wheal Hamlyn is a copper mine in Bridestow, Devon. We are not aware what progress is making in working the sett, but all particulars can be ascertained on application to the purser, Mr. John Ham, Halwill, Devon.

"G. L." (Bilston).—The four Government Inspectors were named in last week's Journal; we believe they will each have 400*l.* per year, with travelling expenses.

"A. J." (Regent's-park).—The letter is palpably unsuitable for publication, from the personal nature of its contents. Had the writer been anxious for the information he professes to seek, it could have been obtained on application at the office,—and were he a shareholder, it must have been known to him. The meeting held at Tavistock was a preliminary one, at which the officers were appointed, and before which no committee or other officials existed—consequently the main point falls to the ground. As to the incompatability of one person performing the joint duties of member of the committee and secretary, that is a matter in which those interested can best judge—it is certainly unusual, but we know nothing as to its "illegality." The lengthy report, in last week's Journal, will enable our correspondent to judge somewhat for himself as to the prospects of the undertaking; the mine has also been reported on by other agents, whose opinions are fully as corroborative of those therein expressed.

"An Adventurer" (Greenwich).—We have no means of ascertaining—neither had the party from whom the shares were purchased.

"A Meter."—We admit the difficulty of opening new channels for the conveyance of coals; but when the advantages of railway transit, and the ease with which it can be accomplished, are taken into view—it being obviously a question of time only when a very large proportion of the supply to the metropolis shall come by land instead of coastwise—the coalowners would do well not to rely upon a monopoly which every day renders more doubtful and insecure. It is impossible that the commodity should not be cheapened when both supply and price are left to find their natural level—a result which no colliery combination, as experience has proved, can permanently prevent, whatever local derangement of traffic may be temporarily produced.

"M. G." (Swansea) will find the information he requires in Mr. Mitchell's paper on the Treatment of Copper Ores (No. IV.) in the Journal of 2d November.

KINGSETT AND BEDFORD MINE.—The letter we have received from Mr. Jury, with the accompanying correspondence, shows, we regret to observe, that matters are much less advanced as regards the settlement of the differences among the shareholders than we had hoped. What it does *not* show, however, is that any good would result from its publication, much less that of the hostile correspondence referred to. On the contrary, as it appears probable that the law will be appealed to, in order, if possible, to determine the amount of truth attaching to the statements of either party, we are perfectly satisfied that our only proper course is to withhold, for the present, any letters on the subject, whatever the quarter whence they may emanate. Our decision need be the less complained of, since, from the strong symptoms of a disposition to "go to law" on both sides, it is pretty evident that a measure of publicity is likely to be given to all matters in dispute, sufficient to satisfy the most inordinate appetite.

"M." (Exeter).—The cost of provisional registration, under the new Act, is—for ornamental designs 1*s.*, and for useful designs 10*s.* The provisional registration remains in force for one year, unless specially extended by the Board of Trade. Anything which has been provisionally or completely registered as a useful design cannot be patented afterwards; because when so registered it is published, or accessible to the public, seeing that upon payment of the proper fee, any one may inspect the drawings and specification, and thus be in possession of full information as to the nature and details of the invention. Thus, as the Patent Law requires that an invention shall not, previously to the date of the patent, have been used in public, or known to the public, a patent granted after the registration, or provisional registration, of an article as a useful design cannot stand good for such article, either as the whole of the invention, or part of the invention, comprised in the letters patent.—Apply for further information to Mr. F. W. Campin, Patent Office, Strand.

"An Engineer" (Leith).—Messrs. H. Fowler and W. H. Favell obtained the contract for the Bombay and Tannah portion of the Great Indian Peninsular Railway. The office of the company is at No. 3, New Broad-street, City.

"W.'s" complaint of the prolongation of the "pyrogen controversy," and the improbability of its serving any practical purpose, is perhaps shared by many others. Yet it seems due to the talented correspondents who have taken part in it, that they should be allowed ample scope for the development of their subject, however unattractive to the general reader. The wide discrepancy of opinion, he remarks, is in part necessarily owing to the obscurity of the subject, which is not one which can be easily rendered inviting to the multitude. To theorise is, however, one of the processes for the discovery of truth, and the deductions made often lead to issues as practical and prosaic as "W." can possibly desire. There is the less occasion for any interposition of ours, as the combatants are manifestly well matched in intellectual skill and ingenuity.

"An Adventurer" (Tavistock).—Authenticate the statement, for our satisfaction as to its correctness, when we may, perhaps, make some reference to it in the Journal. We could not possibly notice such matters from anonymous correspondents.

"W."—A quarter of a teaspoonful of la veno beno is *said* to have the wonderful property of giving to two teaspoonfuls of tea the strength of four, with an *improved flavour*, and a saving of 75 per cent.! The substance itself is *represented* as being the leaf of a climbing plant well known in the East, under the name of "paun"—the real *truth* being that it is a mixture of broken tea-leaves, with about 90 per cent. of pulverised catechu—an astringent, extensively employed by dyers and tanners, as a substitute for gall-nuts. The two leading properties of la veno beno are—first, that it is capable of being sold, under a pretty name, at about six times its real value; and, secondly, that it possesses the power of immediately spoiling the flavour of a good cup of tea.

"B. H."—We did not forsee that our notice of the "Slate Stratum in Ireland" would elicit so much attention. We presume that the notable Ashdon theory of the said stratum dipping under the Channel, and being identical with the stratum in Carnarvonshire, proved too tempting to many who can appreciate an Irish joke, but who were unprepared to see it taking so grave a form as a regular report.

The notice of Messrs. White and Grant's improvements in mine machinery, which appears in the *Mining Journal* of the 9th November last, was extracted from the Glasgow *Practical Mechanics' Journal*.

Mr. D. S Brown's "Proposal for a Provisional Registry of Inventions" is entitled to serious consideration, though open to the great objection that every invention registered as proposed would be liable to be appropriated by foreigners. We do not say this objection could not be effectually obviated; but, unless it were so, we fear the plan, however good in other respects, would not work satisfactorily. The idea embodied in his "Proposal" has, nevertheless, every chance of being fully considered upon its merits, since it is substantially adopted in the report of the committee appointed by the Society of Arts, and forms the basis of one of the demands of the Patent Law Reform League.

We have received an elaborate report on the Milwr Mines, the insertion of which we are compelled to postpone until our next Journal.

In reference to the Share List issued twice each week by Mr. Crofts, that gentleman requests us to state that he will feel very much obliged by any corrections, prices, or other inaccuracies, which in the nature of things, and with the greatest care, must occasionally occur in a miscellaneous list of mining shares, his wish being to make the list as perfect as possible in all respects, but more particularly in the important one—of PRICES.

"John Bull" may rest assured that the subject of patent reform is in good hands, and that no suggestion likely to be beneficial to the interest of the inventor will be overlooked. Whether it is desirable that the Crown should prosecute all piracies of a patent invention would partly depend on the activity displayed by a public prosecutor in protecting the rights of patentees. Our faith in the zeal or scientific judgment of such a functionary is but small; and we imagine that every patentee must feel instinctively that no one could defend his interests half so well as himself, when once the iniquities of the present law are fairly got rid of.

"M. R." (Penzance) is thanked; but the remarks on the case, "Kitto *v.* Richards," are not suited for our Journal.

"Argus."—The numerous complaints which have been lately made concerning the unnecessary and destructive delay in the delivery of telegraphic messages, are attracting a considerable share of public attention; and, if not speedily and effectually remedied, must lead to very disastrous consequences to the present company. We have not space for our correspondent's communication.

The series of papers on Patent Law Reform, by David Mushet, Esq., will be continued, and in which that gentleman will develope his ideas (founded on considerable experience) on this subject, which is now attracting so much attention, and must be considered as one of national importance.

Mr. St. Pierre Foley's papers, on the Geological and Mineral Features of North Wales, will be continued in next week's Journal; when also will appear the first of a series of papers on Historical Notices of Spanish Mining; Railways, Steam-engines, and Machinery; and Electro-Magnetism as a Motive Power.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

*** It is particularly requested that all communications may be addressed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, DECEMBER 21, 1850.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

It must be obvious to those who consider the position of the iron trade, that one of the main obstacles to its prosperity lies in the hostile tariffs against which it has to contend. From an article on this subject, in the Journal last week, the adverse operation of these tariffs will be clearly seen; and the whole scheme is fully proved to be a barefaced attempt to aggrandise the native producers of iron at the cost of the great body of consumers. We are glad to observe, however, that, despite the efforts so sedulously made to instil the principle of protection into the German mind, a public opinion in favour of free trade is being created, which is every day increasing in strength and influence. One striking evidence of this consists in the number of pamphlets springing up in Germany, of which the express object is to expose the fallacies on which the system of protection is based. Among these publications we may name the *Iron Lever*, a translation of which has been forwarded to us, and which may be commended to the notice of protectionists generally, and more especially to those interested in the welfare of the iron trade. For close argument and familiar exposition of the facts connected with this question, we have not met with anything a long time so well calculated to produce a conviction of the utter worthlessness of the pretences by which the protective system is bolstered up; and the wide diffusion of the reasoning therein contained, through every available continental channel, gives good ground to hope that the day is not distant when an important modification of the present duties may be looked for.

The subject derives additional interest, at the present moment, from certain passages in the "Message" of the American PRESIDENT, the drift of which manifestly is to uphold the protective system in the United States, and, perhaps, to pave the way to higher duties than are now imposed. The new PRESIDENT, it is easy to see, is not in advance of his countrymen on this subject, since he talks still more confidently, if possible, than his predecessors of the duty of "encouraging the industry" of his fellow-citizens, by levying duties on goods imported. His argument in reference to protection is thus stated:—

> A duty laid upon an article which cannot be produced in this country—such as tea or coffee—adds to the cost of the article, and is chiefly or wholly paid by the consumer. But a duty laid upon an article which may be produced here, *stimulates the skill and industry of our own country* to produce the same article, which is brought into the market in competition with the foreign article, *and the importer is thus compelled to reduce his price to that at which the domestic article can be sold, thereby throwing a part of the duty upon the producer of the foreign article.* The continuance of this process creates the skill, and invites the capital, which finally *enables us to produce the article much cheaper than it could have been procured from abroad, thereby benefitting both the producer and the consumer at home.* The consequences of this is, that the artizan and the agriculturist are brought together; each affords a ready market for the produce of the other; the whole country becomes prosperous; and the ability to produce every necessary of life renders us independent in war as well as in peace.

The reasoning adopted by the PRESIDENT is just as good for the obsolete system of "bounties" as for the modern scheme of protection. Unfortunately for the validity of such arguments, facts tell a very different tale from that disclosed by the PRESIDENT. So far from a hostile tariff stimulating the skill and industry of a country, its real operation is to paralyse and depress; and if an article is produced under the artificial stimulus of protection, it must be at the cost of the consumer. It is truly an ingenious fiscal process by which it is implied that a "reduction of price" can be the consequence of the protection juggle The conclusion of the PRESIDENT points to an increase on the present duty of 30 per cent., amounting with freight and expenses to 60 per cent., for the sake of keeping out English iron, and thus still further stimulating the industry of his compatriots in producing the home manufacture. But by what miraculous agency iron is to be rendered cheaper to the consumer, as is assumed in the paragraph quoted, we are at a loss to imagine, since a "continuance of the process" will obviously lessen the necessity for additional energy and exertion on the part of the American ironmaster. Being so admirably "protected" now, and, it may be, likely to receive additional protection, if the Legislature is as blinded in this matter as the PRESIDENT, it is not very consistent with human nature to believe that any extraordinary efforts will be made to produce a cheaper article for the benefit of the consumer. It is true, iron is not directly specified in the above quotation; but inasmuch as it is one of the chief articles protected by the American tariff, our observations will not be found inapplicable to the question at issue.

The history of the iron trade in this country will suffice to dispose of the crudities of the PRESIDENT's commercial creed. For a long period the iron trade was a protected interest, without verifying, however, the soundness of the principle, either by increased production or great prosperity. Yet every successive reduction of duty has been followed by an increase of both. Let the statistics of the iron manufacture previous to 1846, when the remainder of the duty was taken off, be compared with the returns up to the present time, when the make of iron shows a production of two millions of tons, or 6,500,000*l.* of value, in the first raw state. How evident it is, therefore, that competition is the only real stimulus to skill and industry, whilst monopoly must be solely upheld by a tax on every interest but the one unjustly protected. For some years past our ironmasters have had to fight against foreign tariffs, and compete with the world, as well as with each

other. The result has triumphantly demonstrated the policy of free trade, which, while leaving us open to the competition of every other country, has called forth the energies which have enabled us to sustain the struggle even with our tariff-protected opponents. So entirely, nevertheless, does the PRESIDENT echo the views of a large proportion of his countrymen, that a work of 120 pages, on the iron trade, bristling with distorted figures and facts, has been industriously circulated, with a view to show the fitness of still further encouraging native industry, in the manufacture of iron, by additional duties. Doubtless the jealous rivalry of England has something to do with the tolerance of such fallacies; the pernicious effects of which our American brethren, with the boundless field of enterprise ever before them, may be content for awhile to endure.

A little further on in the "Message" we are edified with the axiom that "a high tariff can never be permanent," the reason assigned by the PRESIDENT being that "it will cause dissatisfaction, and be changed; it excludes competition, and thereby invites the investment of capital in manufactures to such excess that, when changed, it brings distress, bankruptcy, and ruin, upon all who have been misled by its faithless protection." We might feel inclined to award some praise to this morsel of statesmanlike sagacity, did we not find that it is but the preface—first, to a declaration in favour of specific over *ad valorem* duties; and, secondly, to an intended modification of the present tariff, making such discrimination in favour of American manufactures as may encourage home production, without excluding foreign competition. We need be at no loss to guess what this means, and to what it is likely to lead; and with their past experience of the tendencies of American policy, the iron trade of this country may well be excused, if they feel some alarm lest they should be made the subject of the "discriminating" experiment in question. With the present amount of duty they have great cause to find fault: they are forced to enter the field of competition with the American manufacturer, with all the benefits of protection at his back. But as the PRESIDENT expresses a desire for the "*whole country to become prosperous*," we may be allowed to suggest to him whether taxing a cheap useful necessary, like iron, which gives employment to every individual industry, is the best means to be adopted; or whether allowing the great mass of industry in the United States to get the largest quantity for the least money, would not ensure his country's prosperity much more rapidly?

The arrangements respecting the proposed "Mining Exchange" are assuming, if not a conclusive, at least a definite character; and it will be satisfactory to learn that the regulation of the various matters, consequent on the intended transfer of mining business to the Stock Exchange, will be left in the hands of those who are interested in, and most competent to deal with them. The names of several gentlemen, who will, we believe, form a committee of management in the New Exchange, have transpired; and among them we may mention Messrs. W. A. THOMAS (chairman of the Devon Great Consols), THOMAS FIELD, J. Y. WATSON, and W. H. LA SERRE (director of North Basset), to whom will be added several others of the most respectable mining agents. This committee, when the preliminaries are completed, will draw up a series of regulations relative to the admission of members, over which, they, of course, will exercise a full control. It is intended that no shares but those of acknowledged character shall be included in the list; and a weekly list of prices will be issued under the sanction and authority of the committee. New mines will only be admitted on being regularly proposed by two members, and on reports of a satisfactory nature being furnished as to the respectability of the parties bringing out the speculation. Hitherto, the Stock Exchange authorities have manifested a desire to afford every facility to the mining interest, so as to enable them to exercise the power which ought rightly to attach to them in the conduct of mining business. They will not, however, carry their courtesy quite so far as to admit the mining body to the general business of the Stock Exchange, while they claim that privilege for themselves, as regards negotiations in mining shares—which seems but a one-sided species of reciprocity at best. On the whole, from the spirit that has been evinced, there seems no reason to doubt that the proposed arrangement will shortly be effected, though no time has yet been fixed for its coming into active operation.

"Railway Influence and Extension" formed the subject of an interesting paper, read by Mr. W. B. ADAMS, at the meeting of the Society of Arts, on Wednesday. Before coming to railways, the lecturer touched upon the civilising results of our former less imposing lines of communication by land and by sea, observing that the Romans were the greatest road-makers, and that the march of civilisation was along the military roads they constructed. Such roads, however, until the invention of railways, were for the wealthy and few, or else for the couriers of commerce, the travellers sent out by mercantile houses; but never for the labourers, to whom a journey to any distance would be at the expense of a week's wages. All this has been changed by railways, the construction of which was traced from a simple plank to the tramway, and thence to the opening of the Leeds and Manchester line, which inaugurated a new era for mankind. In dealing with the subject generally, Mr. W. B. ADAMS dwelt much more on the physical blessings and advantages which are to follow in the train of railways, than on the higher influences which attach to them; indeed, we suspect he somewhat astonished his audience by the multitude of good things he predicted as the certain result of the railway system. In his prophetic gaze, he sees not only towns springing up around every terminus, but branch roads along the great trunk lines, carrying the blessings of civilisation and steam into the heart of benighted agricultural districts. Farms will be no longer farms, but factories for the raising of food after the newest fashion, and with the aid of the most potent and complex machinery. Farm labourers will then no longer be the clodhoppers they are at present, but skillful mechanics into the bargain, after a few weeks' practice. Even Mr. MECHI might have been edified by this part of the lecture, though, as a practical philosopher, he would hardly think Tiptree Hall as yet quite ripe for the introduction of such marvellous transformations. The lecturer also gave a glowing description of what seemed to be an imaginary model establishment for the working classes, replete with all the appliances of comfort, and even of refinement, and in which, by combination, the inmates could enjoy the advantage of teachers, the charms of music, and similar delectations. These "gregarious establishments" are a favourite fancy of Mr. ADAMS, to judge from the fervour with which they were depicted; and, as far as we could perceive, they would, if carried out as he contemplated, be a superior sort of "Harmony Hall," but, we hope, with a better result than attended that notable dodge of Mr. OWEN. The lecturer, indeed, expressly referred, in the way of illustration, to the "happy family;" who were happy, he observed, because they were well-fed—a result, of course, to be predicated of the railway-created gregarious establishments in question.

The precise connection between the subject of the evening, and many topics of this and a similar kind—all flowing as results from this "patent age of new inventions"—seemed so dubious, that one gentleman (Mr. VIGNOLES) suggested a doubt whether these matters came within the scope of the lecture. The chairman, however, decided that it was better to hear the paper read throughout; and Mr. ADAMS had, consequently, the satisfaction of delivering it in full. With very much of what he advanced, all his auditory must have agreed; nor is it easy to be over-sanguine in delineating the marvels which the railway system is destined to produce. If we venture to hint a fault, it is that in his railway millennium the material elements too much predominated. The intellectual seemed wholly subordinate to the lower results of production, convenience, cheapness, and other advantages to be expected from the extension of the system. He took what Mr. COBDEN, in one of his peace harangues, termed a "low motive" view of the subject throughout the greater part of his lecture; and, by embracing too large a variety of discursive matters, instead of limiting himself to the broad results, gave a visionary aspect to what, after all, *may* turn out to be hard facts. This is one of the perils of going too much into details, which, being modified by unforeseen circumstances, are seldom realised in the way which some profound philosophers are apt to imagine.

SALE OF MINING SHARES BY PUBLIC AUCTION.

The first of a series of sales, to be held periodically, took place on the 18th inst.—Mr. R. Tredinnick, who is well known as a broker, or agent, in the purchase or sale of mining shares, being in the *rostrum*. From the novelty of the sale, a larger assemblage might have been calculated upon; but, on the other hand, it is to be borne in mind that the project must, if successful, necessarily tend to interfere with the present system of effecting transactions in this description of property. We would suggest to Mr. Tredinnick henceforth to dilate somewhat on the nature of the several mines; or, rather, place before the auditory their position, and the points they hold out of advantage; but such, in the present instance, was in most cases omitted, and hence the visitor at the sale, without possessing that information, was not in a position to form a judgment, in a manner, equal with that of the general mining adventurer—this, however, will doubtless be amended in subsequent sales. There can be no doubt that the more open the market, the greater are the inducements held out to the capitalists, which, while it may tend to the benefit and advantage of the buyer, may realise for the vendor a fair price. The railway shares, although not numerous, averaged full prices. We subjoin the prices at which the mining shares were knocked down:—

Stray Park—15 shares, at 20*l.* per share.
Cook's Kitchen—10 shares at 10*l.* each.
Alfred Consols—5 shares at 20*l.* each.
United Mexican—10 at 6, 10 at 5¾, and 5 at 5¾.
Bryn-Arian (Lead)—10 at 2⅞, 20 at 2⅞, 10 at 2¾, 20 at 2¾, 10 at 2*l.* 9*s.*, and 20 at 2¾.
Wheal Harriet—10 at 4¼, 10 at 4¼, 10 at 5, 10 at 4¾, 10 at 4*l.* 16*s.*, 20 at 5, 20 at 5, and 20 at 5.
West Providence—5 at 58*l.*
Pencraigdu and Caenant—10 at 2¼, 10 at 2⅝, and 10 at 2⅝.
Spearne Consols—5 at 75*l.*, and 5 at 75*l.*
Pen-y-bank and Ergiodd—10 at 5⅝, 10 at 5¾, 10 at 5¾, 10 at 5¾, 5 at 5¼, and 5 at 5¼.
West Treasury—5 shares, at 5¼.
Condurrow—two lots, 1 share, at 115*l.*
Lelant Consols—2 at 20½, 3 at 20, 2 at 19⅞, 3 at 20, and 1 at 20.
East Wheal Frances—2 lots, 5 shares, at 4¼.
Tincroft—5 lots, 10 shares each, at 11¼.
South Tamar—2 lots, 10 shares, at 1⅝.
Bedford United—5 shares, at 5⅛.
Cook's Kitchen—10 shares, at 10¼.
Herodsfoot—2 shares, at 14¼.
Great Wheal Baddern—2 shares, at 84*l.*
Annotto Bay—three lots, 10 shares, at 4¼.
Worthing—10 shares, at 2*l.* 6*s.*
Pennant and Craigwen—10 at 1¼, 10 at 1¼, and 5 at 1¼.
West Goginan—two lots, 10 shares, at 26*s.*
South Caradon—1 share, at 215*l.*
Caradon Vale—50 shares, at 17*s.*
Treviskey and Barrier—¼ share, at 140*l.*

Among the lots withdrawn were shares in Holyford, East Crinnis and Pembroke, Cwm Erfin, Esgair Llee, Seton, East Wheal Russell, Levant, Trehane, Linares, Llawn-cumback, Bwich Consols, Wheal Franco, Exmoor Wheal Eliza, Black Craig, West Tolgus, Marke Valley, and Warleggan.

The next of these sales will take place on the 1st January, and will be continued each succeeding Wednesday.

TESTIMONIAL TO MR. THOMAS FIELD.

At the recent Great Wheal Alfred meeting, it was suggested that the numerous and important services which have been rendered to the mining interests by Thomas Field, Esq., deserved some public acknowledgment, when it was determined that a subscription should be entered into to present him with a piece of plate, which should at once evince the high feeling with which his efforts to promote mining were regarded, and at the same time be characteristic of the circumstances giving rise to the object. To carry the object into effect, committees have been formed in Cornwall, London, and elsewhere, and when the lists of contributors are completed, a deputation from each committee will meet, when designs for the testimonial are to be determined on. The following gentlemen form the respective committees, to whom communications are to be addressed:—

LONDON COMMITTEE:—Messrs. Watson and Cuel, T. B. Simpson, P. Clay, Watson and Ensor, George A. Ashton, and James Herron.

CORNWALL COMMITTEE:—Messrs. Henry Noel, Nicholas Harvey, John Richards, jun. N. Trevena, Chas. Bennett, Wm. Crotch, Wm. Hosken, R. R. Michell, Francis Pryor, Wm. Richards, John Roscorda, T. Richards, R. Greenwood, and R. Nicholls, jun.

LIVERPOOL COMMITTEE.—Messrs. Henry Richmond and Stephen Langley.

HULL COMMITTEE.—Messrs. John Schofield and James L. Alsop.

A list was circulated in the room, when nearly 120*l.* was subscribed.

THE DERWENT MINES, DURHAM.—The extent of ground occupied by the Derwent Mines' Company is sufficient for at least half a dozen setts such as are granted in Cornwall. The length is about eight miles, and the mean width about four miles. A portion of the lease is held from the trustees of Lord Crewe, then Bishop of Durham, who purchased of the Crown the estreated lands of one Forster, an officer who served under the unfortunate Earl of Derwentwater. The Derwent Mines' Company commenced operations in 1833, and is at present divided into 7160 shares of 10*l.* each. Previous to this the mines had been worked for many years, and had been very productive even close to the surface, where some enormous excavations are to be seen, one of which at a junction with the Whiteheaps vein has an opening of 100 feet across, of which a marvellous story is told of a chair having been cut out of the solid lead ore for a former lady proprietress to sit upon when she visited the mines. This whiteheap vein may be seen following a straight line for a long distance, and is crossed by (amongst others) the great Jeffrey's or Ramshaw's vein, at a point not far distant from the present workings, and presenting a most promising field for trial. The course of Jeffrey's vein can also be distinctly traced for miles. The whole of the ground, in fact, between the company's present workings, and the rich mines of Col. Beaumont's to the westward (the most productive in the kingdom), is virgin for the length of three miles, affording ample space for virgin operations. Besides the veins already mentioned there are many others, one of which has been lately cut by a cross-cut from Cragg shaft, at 16 fathoms from adit, and some fine lead ore discovered, which continued in driving east upon the vein. The principal shafts are Routh's, Ellen's, and Cragg's on the Whiteheaps lode; and Ramshaw's, Jemmy's, Westgarth whim, Deborah's, Pean's, Palferarn, and Green's, on the Jeffrey's lodes. The greatest depth attained is in Ramshaw's shaft, which is 100 fathoms from the adit level, or 110 fathoms from surface. The drainage is performed by a 44 ft. by 3 ft. 6 in. breast water-wheel, placed on Ramshaw's shaft, at the intersection of the Jeffrey's lode, and a 20-feet wheel at Routh's shaft, on the Whiteheaps lode. There is also a 48-feet by 4 feet breast-wheel at Deborah's, or Jemmy's, from which a line of flat-rods, about 1600 yards long, is being connected with Routh's shaft. The small quantity of water may be partly attributed to the nature of country, which consists of strata or sills of grit and sandstone, alternating with plate and coal beds. The veins are found most productive in the high and low grit sills, also in the crag. The ore is crushed and dressed close to the mines; and is smelted at the works on the spot. Here there is an excellent crushing mill and two furnaces. The lead containing silver was, until recently, desilverized at the company's establishment at Bill-quay, on the banks of the Tyne; but the company have discontinued these works, and now sell the lead with the silver in it. The present produce of these mines is about 80 bings, or 32 tons of ore per week, which is not enough for profit, but some improvement may be expected.

COLLIERY INSPECTION.—A well-informed correspondent writes:—"I have heard, on undoubted authority, that it is not the intention of the Government to make any addition to the present inspectors of mines, nor can I learn that it is in contemplation to appoint sub-inspectors. So that, after all, it will be even a more 'crippled' measure than we anticipated. There are about 1200 collieries scattered over Great Britain; therefore, each inspector will, on an average, have 300, and much travelling and writing, and he cannot inspect more than three in a week, and, therefore, a colliery can only be inspected once in *two years!* It strikes me that no good can or will result from such a measure, and that we ought not to be content with it. But it will only be fair to wait awhile, and see how it works."

PLYMOUTH FURNACES (Merthyr).—A steam-engine, 80-horse power, for supplying blast for these furnaces, was started on Thursday last, in the presence of a large concourse of spectators. By the erection of steam-engines, these works are becoming rapidly independent of the River Taff, so that little or no inconvenience will be felt when the supply of water is cut off by the heat of summer, or the frost of winter. In former years the workmen have been idle for weeks, in consequence of the lack of water, their generous employer giving them a weekly pension during the drought. Such a state of things is not to happen again.—*Swansea Herald.*

RAILWAY TRAFFIC.—The published traffic returns of railways in the United Kingdom during the 49 weeks of the present year, ending 7th December, shows that the aggregate receipts amounted to 12,036,170*l.* on 6240 miles of railway. For the corresponding period of 1849 the receipts amounted to 10,897,600*l.* on 5160 miles, showing an increase in the gross receipts of 1,638,570*l.*, or 15·8 per cent., and in the mileage at the end of the 49 weeks of 1080 miles. The average receipts per mile for the 49 weeks in 1850 amounted to 2111*l.*, and in the corresponding period of 1849 to 2183*l.*, showing a falling off in the receipts per mile of 72*l.*, or only 3·3 per cent. on an increase in the mileage of 20·9 per cent.

WEST CORNWALL RAILWAY.—Every impediment to carrying out this undertaking is now removed by the amicable adjustment of the action against Mr. Mowatt. The subscription contract will now be signed, and the works proceed with all dispatch. The first turf for the line from Hayle to Penzance was cut in a field adjoining Messrs. Harvey's Foundry, at Hayle, Mr. Ritson, the contractor, with a portion of his staff, Mr. Brunton, the resident engineer, Mr. Pike, the superintendent, and others were upon the ground, when Mr. Pike turned up the first shovel of earth, after which the navvies began their work. At the conclusion of the ceremony the parties adjourned to Crotch's Hotel, where a dinner was provided.—*Penzance Gazette.*

IMPROVEMENTS IN SMELTING, CONSTRUCTION OF FURNACES, &c.

Mr. A. Parkes, of Pembrey, Carmarthenshire, experimental chemist, has just obtained a patent for improvements in smelting and treating certain metals, and in the construction and manufacture of furnaces, and the materials to be used for the same, such furnaces and materials being applicable to the treatment of metals and metallic compounds, and to various other useful purposes of a like nature.

The patentee's invention consists—1. Of improvements in the construction of furnaces employed for calcining copper and other ores.—2. Of the extraction of silver from lead.—3. Of the preparation of certain compounds for the manufacture of fire-bricks or other forms suitable for smelting furnaces, and other useful purposes.—4. Of the construction and arrangement of apparatus for facilitating the combustion of anthracite or stone coal, by the application of numerous jets of steam.

As regards the first part of his invention, the patentee constructs a circular furnace of about 12 feet in diameter, the floor of which is equally heated throughout; or, if there be more than one floor, the heat passes beneath this second floor in its passage to the chimney. The second floor must be placed about 4 or 5 feet above the other floor; passing through the floor or floors is a shaft of iron, working in a centre bearing at the bottom of the furnace, and a collar at the top; this shaft is provided with one or more arms, either hollow or solid, which project from the shaft in a horizontal direction, and are about 1 ft. from the level of the floor; to these arms several prongs or rakes are attached, reaching to within 1 inch of the level of the floor. The ore to be calcined having been placed on the floor of the furnace, motion is communicated by suitable means to the shaft, and the mass of ore is stirred by means of the rakes or prongs attached to the arms of the shaft. The shaft is left open at the top, and is perforated near its axis with numerous apertures, with the view of allowing a free circulation of air for the purpose of keeping the iron cool, and preventing its being injured by the heat of the furnace. The patentee states that it has hitherto been the practice to accomplish the object obtained by the above-mentioned process, by using a revolving floor, and he claims under this head of his invention the application of a revolving apparatus on a fixed floor, for agitating the mass of copper or other ore undergoing the process of calcination.

The second part of the patentee's invention, the separation of silver from lead ore, is thus effected—1 ton of lead ore, containing 100 to 200 ozs. of silver is melted in an iron pan, and to it 1 cwt. of zinc in a melted state is added; the mixture is stirred, and then allowed to remain quiet, with the application of sufficient heat continued for a short time, to keep the whole in a fluid state. The heat is then reduced, and the zinc in union with the silver forms a crystalline mass, which floats on the surface, and may be removed by means of perforated ladles. As the above-named quantity of zinc is sufficient for the abstraction of a larger quantity of silver, the metallic alloy before mentioned is melted and applied in the place of zinc to the next batch of melted lead, and this process continued until the zinc has, as it were, become saturated with silver, which it will be when it has taken up about 400 ozs. of that metal. The separation of the metals is accomplished by placing fragments of the alloy in sulphuric or muriatic acids, diluted with four or five times its weight of water; the acid dissolves out the zinc, leaving the silver in the metallic state, which may then be refined for use. No claim under this head.

The third part of the patentee's invention relates to the manufacture of compounds for fire-bricks, &c., and is performed as follows:—He takes any quartzose substance (the more silex it contains the better), reduces it to small fragments by suitable means, and passes them through sieves of one-eighth to half an inch diameter in the mesh. The particles thus obtained are mixed with from three to 10 per cent. of wet slaked lime, sulphate of lime, or sulphate of baryta, one or more of them, and thus a composition is obtained which, when moulded, dried, and fired in the usual way, forms fire-bricks, or other forms suitable for smelting furnaces and other purposes. The larger the particles of quartzose materials used in the bricks, &c., the better will these be adapted to stand exposure to high temperatures. It is desirable to do with as small a portion as possible of the binding material employed.

Under this head the patentee claims, the combination of sulphate of lime, sulphate of baryta, carbonate of lime, or caustic lime, with silex or quartzose materials, to form fire-bricks, and other forms suitable for the construction of smelting furnaces, and for other similar purposes.

The fourth part of the patentee's invention consists in the construction and arrangement of furnaces, in order to facilitate the combustion of anthracite or stone coal, by means of steam brought into contact with the ignited fuel. The patentee is aware that steam has been applied to this purpose by means of pipes or jets, and, therefore, he does not claim the application of steam generally, but only the method of causing it to pass in a finely divided state to the fuel, so as to ensure its complete decomposition, for which purpose he passes it through pipes pierced with holes of the size of 1-32nd of an inch, these pipes being placed parallel to, and underneath the fire-bars, so that the steam may impinge on the burning fuel.

THE EMERY OF ASIA-MINOR, AND THE MINERALS GEOLOGICALLY ASSOCIATED WITH IT.—No. II.

BY M. J. L. SMITH.

This part of the subject relates particularly to the minerals which are found associated with emery in the districts already mentioned in the first portion of the memoir. It was there shown that emery is a substance met with in considerable abundance in certain parts of the world, constituting a mineral of the first order, and deserving a place in the category of rocks. It will be further useful to give some account of the mineral products which are found associated with it, and of some novel circumstances which I have observed. In the first place, I shall mention *corindon*; although emery is composed in great part of corindon, the examination of the latter substance in a state of purity (in the crystalline form, in which I have often found it when in contact with emery) has brought to light some circumstances which in dealing with a substance of so composite a character as emery it would have been impossible to learn. The most remarkable of the circumstances which the analysis of corindon has brought to our knowledge is, that it contains, according to its variety, water in variable quantities: this is the case with all kinds of corindon, excepting the sapphire and ruby. I consider the presence of water in combination in corindon to be a circumstance of considerable importance, inasmuch as it proves that harmophanous corindon and hyaline corindon (adamantine and telesian spar) are formed under different conditions. I may remark here, that in the examinations I have made of different specimens of emery, the most careful research has failed to show the presence of hyaline corindon in any one instance.

Diaspore.—This is a mineral which, up to the present moment, has not much occupied the attention of mineralogists, and which has only been found in two or three localities; I hope, however, to be able to prove that diaspore plays an important part in relation to formations of emery and corindon. Before my attention was drawn to the examination of diaspore (which was discovered by M. Le Lievre), it had been analysed by M. Dufrenoy and M. Haidinger; and the districts in which it had been found were, Gumuch-dagh and Manser, in Asia-Minor, and the islands of Naxos, Samos, and Nicoria, in the Greek Archipelago. I have found that diaspore is almost always mixed with corindon; indeed this appears to be so invariably the case, that where it has not been found thus associated, it is, I believe, only because it has not been sought with sufficient care. In some crystals of corindon which have been obtained from China, I have already succeeded in discovering diaspore.

Emerilite, a new species of mica, is another of the mineral substances found in deposits of emery. I have given to this the name of emerilite, and it appears to belong to the mica family. I first discovered this mineral in the emery of Gumuch-dagh, in Asia-Minor, and afterwards in that of Naxos, Nicoria, and Manser. Its presence in all the varities of emery I have examined, excepting that of Kulah, has induced me to call it emerilite. When I first made known this discovery, Prof. Silliman entered upon an examination of the different minerals found in the corindon districts of the United States; he has never failed to find in them evidences of the presence of emerilite. Since I returned to Paris, I have discovered emerilite in a specimen of the emery of Siberia; and I have reason to believe that it is likewise present in the corindon of China; but as I have not yet analysed this, I cannot be certain on the point. Up to the present time, emerilite has only been found associated with emery, or what is the same thing, with corindon; in these it is often contained in the centre of the mass, but most frequently at the surface.

Ephesite is another new mineral; it has a compact lamellar structure, and is pearly-white in hue; it scratches glass with great ease, but differs

from the last-described substance in composition, as it contains a larger proportion of alumina, and less of the bases of protoxides: it has been found in the emery of Gumuch.

Chlorotoid.—The variety of this substance, which I have found in the emery of Gumuch-dagh, has not the same composition as most of the minerals of this class, such as the chlorospar of the Oural, the massonite of America, or the sismondine of St. Marcel; chlorotoid resembles the latter most of the three. The other mineral substances which I have found most associated with emery are—hydrogilite, zinciferous spinel, pholerite (or rather a hydrated silicate or alumina, identical in composition with the pholerite of Guillemin), mica, black tourmaline, chlorite (indentical with that of Mont des Sept Lacs), protoxide of iron, oligistic oxide of iron, hydrate of oxide of iron, iron pyrites, rutile, ilmenite, and titaniferous iron. There are, besides these, some two or three others; but as yet these species have not been established, on account of the difficulty in obtaining sufficient of the substance in a pure state to submit it to analysis.

In conclusion of this description of emery and the substances by which it is accompanied, I think I may venture to say that the hydrates of alumina, as diaspore; the silicates, as emerilite, chlorotoid, and tourmaline; and the minerals of iron, as magnetic iron ore and titaniferous iron, are almost always found whenever corindon is present.—*Comptes Rendus.*

ON PATENT LAW REFORM.—No. III.—HEATH'S PATENT.

BY DAVID MUSHET, ESQ.

But there is a further question, the apex to this pyramid of oppression, by the omission of which alone the Court was able even to hang together the disjointed features of its argument. It is evident that if the obscurity of the equivalent is to give the pirate any title to his fraud, it is thereby inferred that he detected and applied such equivalent; and that if he had not the merit of the original invention, he still had exercised some ingenuity in devising an adequate substitute. But the facts were so entirely the reserve, that it became necessary to *omit* any allusion to this very essence of the case in a plea for the guilty, based upon innocency of intention. It was proved, without even an attempt at denial, that the substitution of the elements of carburet of manganese was solely the suggestion of the plaintiff. The persons who were employed in his operations gave the history of the first formation of the carburet separately, and then its formation in the more economical method by the same operation which fused the larger weight of steel. (This evidence makes more entirely unintelligible the passage I have referred to, as to the ignorance of the formation of carburet "*in a state of fusion, prior to this investigation.*" Does it mean prior to the trial, or prior to Mr. Heath's investigations, or what does it mean? In either case it is contrary to fact. The mode of the formation of carburet of manganese had never been a question amonst persons competent to give an opinion—viz.: *those who were acquainted with it.* It was its *application* which formed the novelty.) The defendant's own letters prove his receiving latterly the composition of coal-tar and oxide in place of, and for the same purposes as, the carburet; and the composition of the packets so received was proved by the plaintiff's people, who compounded and dispatched them. There was no doubt nor difference on the matter; nor had the plaintiff any reason to know his gratitude had departed, and the devil had entered into the man, until he found him courting the London market as a steel maker on his own account, and vending the welding cast-steel as his own property. There was not, therefore, a spark of ingenuity to grace his treachery, or justify his possession; and, to the dishonesty of a theft, he added the turpitude of breach of trust. The metaphysics of justice may attempt to screen such baseness, and discourage scientific merit by a subtle distinction, that a fact indisputable amongst men of science was not *well known*; but what must be the fate of science if it is to be thus tested, not by the opinions of those who know it, but by the voice of the ignorant multitude? Furnaces, with heat sufficient to combine carbon with manganese, are not as common as kitchen fires. Such furnaces, and the appliances connected with them, are only in the hands of the scientific, just as shoemakers use awls, and judges wear wigs—all which classes might be perplexed by the transposition of their paraphernalia. The thin substance of a metaphysical brain might entirely evaporate over the fire. The philosopher feel sadly stultified by the wig; and the shoemaker's senses be struck aghast before a cobbled judgment. Yet, nevertheless, it was a proven fact plaintiff had a furnace yielding heat sufficient to make carburet of manganese by pounds—*a fortiori*, much more could it turn out ounces. Why is the *cuique credendum* to be denied to men of science, and the rule be absolute that they are not to be believed. Judges must be taught better. It is the common cause of all who pretend to something above vulgar information. They are bound to take each other on trust. The most important investigations are conducted on foundations taken from authority. Facts which they are not acquainted with, they must learn from those who are.

The doubts propounded in this case are merely a ridiculous exposure. The reasoning is like a child at his alphabet, disputing that *a* by itself *a*, is not the same letter when written into Parke and Alderson. If in the plenitude of ignorance they had raised a question whether a blast-furnace charged with oxide of iron and carbon could produce the same substance of grey iron in a casting as a cupola charged with pigs, they would have raised a rebellion, because ironfounders are legion, and their acts matter of notoriety. They could not have ventured to assert *that* fact was not *well known*. Yet the analogy is perfect, the castings are made cheaper by one operation than by two, and in each case there is a carburet formed and used, the one of iron, the other of manganese. But had the habitudes of carburet of manganese been notorious, there would have been no ground for a patent. The substance was known, and the manner of its formation; but because Mr. Heath had better acquainted himself with its habitudes than any one else, and made it in larger quantities, this merit of superior investigation was to deprive him of his reward. Thus novelty is at once life and death—a patentee's beginning and his end. He is transfixed in the dilemma of the witch, who if she floated was burned for that clear proof of diabolic agency, and could assert her innocency only by getting drowned.

Half the present business of the world is based on accepted scientific data. The credit of a class is not to be shaken to screen a rogue, opposing cobwebs of sophistry to the force of fact. We receive numerous facts upon much more isolated testimony. We believe that ice surrounds the polar regions, though we may not have seen it—that whirlwinds march columns of sand across African deserts, though we have not been buried in them; and that New Zealanders eat men, though we have not been eaten; nay, more, I believe in the existence of clear-minded and straightforward judges, even against the evidence of this decision. To trifle with words, ridiculous as the trifling may be, proves always a disastrous occupation. It is, therefore, to be hoped this case is the last barbarous effort of expiring ignorance in the persecution of science. *Partially* quoting the plaintiff's specification, it is stated defendant never *meant* to use carburet of manganese, as if the use of carburet of manganese, "*without an object*, were the whole claim.

The claim expresses the "use of carburet of manganese in making an improved cast-steel." The improvement of cast-steel is the real object which is thus sunk out of sight in the judgment; no honest man can doubt that if defendant effected that improvement by any means, into which carburet of manganese in any form, condition, or degree, entered, if even as remotely as it was directly, he infringed the strict letter and intention of the defendant's patent. The position of the defendant is not enviable; I remember an instance given by Dr. Murray, in which an individual attempt in Hull to deprive him by fraud of a patent right, was visited by expulsion from the town, and it must be a bad town from which such a man is not hunted. But he has merely been the tool of others—the cat's-paw, not of one monkey but a troop. His individual gain is trifling, he is but the urchin who is hired for a penny to take the risk, and cash the stolen note. His private share of the enormous booty filched from the plaintiff is so small, that nothing shows so much the innate ignominy and appetite for dishonour, as to prefer thus to wriggle in the dirt in a cleft stick, and be the cesspool to the trade of Sheffield, when he might have held the honest and more lucrative position of prior licensee. At the least he has earned himself a name for meanness, and in the all-important history of this metal he will go down to posterity as a sort of blotch, or moral scoria.

The Sheffielders, I am glad to see, are preparing for the Great Exhibition. I trust my former suggestion will be adopted by them to the full; 100,000*l.* is stated to be the value in preparation by one house alone. How greatly the worth of the whole contributions will be increased, when decorated by the labels I proposed of honesty and gratitude. I presume the judicial class is not to be excluded from the benefits of the great building. Let it exhibit this judgment, illuminated with a picture of Solomon, after he had wisely discovered the true mother of the child, handing it over to the Pretender, because she stole it with a pair of shoes on, which it was not born with. Not having their gift, I can say nothing of the *intention* of the judges; but will believe, in their own spirit, that they did not *intend* to injure the plaintiff, although they did it. Nevertheless, the whole case lies in a nutshell. Was Mr. Heath seeking to deprive the defendant of anything to which he had *any* title? Was he seeking to appropriate to himself anything to which *any one else had a title?* Had he himself an original equitable title, *proved by a verdict*, to the discovery of the extraordinary effects produced by carburet of manganese *in both forms of its use?* If *he had*, and the *Court knew he had*, as clearly as the jury, by *what act* had he subjected himself to incur the *penalty of forfeiting his property?* The object of justice is *to preserve to every man his own.* If the institutions for that object are so overlaid with real or verbal oddity as to *do the contrary*, the sooner they are renewed in the spirit of their mind the better.

ON THE ECONOMICAL APPLICATION OF THE WASTE GASES FROM BLAST FURNACES.

The economical application of the waste gases from blast furnaces has engaged the attention of several iron-masters in the South Wales iron-making district during the last 12 or 18 months, and not a few of them have expended large sums in their endeavours to turn these otherwise useless products of combustion to profitable account. The results of their experiments (which have been conducted at an immense cost—in some instances exceeding 10,000*l.*) are so very different, however, from what the promoters of the measure anticipated, that a brief outline of the facts brought to light may not be wholly uninteresting to the proprietors of similar establishments in Pennsylvania and adjoining States.

The experiments have proved, beyond a doubt, what was well known on the continent of Europe—namely, that by attention to the manner of collecting, conveying, and applying the gas to the boilers, the blowing engines can be worked without the employment of coal fires. But it is found that the heat given out by the ignited gas is much inferior, both in quantity and intensity, to that from coal fire, and that two boilers with fires will generate as much steam as three with the gas apparatus. From this it will be apparent that, with the gas, an increased number of boilers are required, entailing a large outlay of capital, in addition to that expended on the apparatus for the collection and conveyance of the gases. This large expenditure of capital, however, would be no obstacle to its permanent adoption by the large Welsh proprietors, if the saving of fuel was real, instead of being, as it is found in practice to be, imaginary.

It is found that, with the abstraction of the gaseous products of combustion, a larger quantity of fuel is required in the blast furnace to smelt a given weight of iron-stone. This increased consumption, while it is in no one case less, is in some greatly in excess of the saving effected by the use of the gas at the engine fires and hot-air stoves. In addition to this increased consumption of coal in smelting, the plan is attended with the further disadvantage, that, immediately on the application of the apparatus for the abstraction of the gases, the make of the furnace is largely reduced. Furnaces which formerly produced 150 and 160 tons per week, now produce only 120 to 130 tons, although, in all other respects, working under precisely similar circumstances.

These are the principal disadvantages, but others of scarcely less importance are found to attend the plan. Among these may be mentioned great irregularity in the working of the furnace. "Scaffolding," or a jamming together of the materials in the body of the furnace, so as to form an arch, the gradual descent of the materials under which ultimately occasions a large cavity to be left, is of frequent occurrence with the gas furnaces. Persons conversant with the economy of an iron-works well know how very important it is that the materials charged into the mouth of the blast furnace should descend regularly and uninterruptedly, and the trouble and annoyance occasioned when it is otherwise.

This scaffolding of the materials in the interior of the blast furnace, and their subsequent sudden descent of several feet at a time, forms one of the greatest obstacles to the successful application of the plan. That this may be the better understood, it will be necessary to mention that the gas is collected by sinking into the mouth of the furnace (so that its upper end be level with the charging plates) a wrought-iron tube or cylinder, five or six feet deep and six or eight inches smaller in diameter than the furnace mouth. In the ordinary course of filling the furnace this cylinder is kept full of materials, but around the exterior of that portion below the mouth of the furnace an annular chamber is formed by the space between it and the interior of the furnace; from this chamber the gas is collected by means of pipes or orifices in the lining of the furnace, and conveyed away to the fires. Whenever the materials within this cylinder descend below its mouth, as is frequently the case when the furnace is "scaffolding," the atmospheric air (at all other times rigidly excluded) now obtains admission into this chamber. On these occasions the quantity of air which mixes with the gas is so great as to destroy its heating properties, and render it useless for generating steam.

That the increased consumption of fuel, and reduced make of iron, is owing to the abstraction of the gas there can be no doubt, for whenever the collecting apparatus is removed, or when, from any cause, it is not in operation, an immediate change is observed in the working and produce of the furnace. Furnaces working with coke fuel evolve a large quantity of gas of considerable heating power; those working with semi-bituminous coal in the raw state give less gas and of a lower power, while furnaces using anthracite as a fuel give the least of any that have been tried. As might be expected, these unlooked for results have completely checked the further application of the principle; but though the experiments made have thus far been unsuccessful, they have not yet been abandoned. The extent of capital swallowed up in alterations for the adaption of the plan to the existing engines and stoves, and the hopes entertained by some of the most experienced iron-masters, that it will ultimately prove successful, have hitherto prevented this being done; but should the next 12 months not witness some important improvement on the present system of collecting and applying the gas, so as to obviate the disadvantages which now attend its application, it will be finally abandoned.

The non-success which has attended these attempts to economize fuel, by withdrawing the heated gases, &c., from the blast furnace, and applying them to other purposes, deserves the serious consideration of furnace proprietors in Pennsylvania and Maryland; for though the plan of connecting the hot-air stove with the tunnel-head may not have an equally injurious effect on the working, yield, and produce of the furnace with the one described, there is too much reason to fear that it increases rather than diminishes the cost of smelting. A careful comparison of the coal consumed in converting the ore into pig-iron, with that used in Welsh furnaces working on the open plan, offers a ready means of ascertaining what advantages or disadvantages attend the respective systems. An inquiry of this kind would necessarily involve some time and expense, but the information derived from it would be of very great value to those interested.—HU. L. DAMSEL: *Glamorganshire.*

The above communication was forwarded from Wales to the *Journal of the Franklin Institute*, and on which a writer in that publication (Prof. R. A. Tilghman, we believe) makes the following remarks:—

"The principal objections urged in the above article to this most important improvement in manufacturing iron, appear to be an increased consumption of coal, a diminished yield, and a tendency to scaffolding. That the mere fact of using instead of wasting the gases escaping at the tunnel-head, after they have entirely finished their action on the charge, should seriously affect the working of the furnace, seems so strange a result as to lead to the suspicion that the mode in which the change was attempted may have had more share in producing it than the change itself. It will be observed that all the furnaces spoken of above seem to have been altered for the purpose of collecting the gases in the same manner—that is, by sinking a wide-flanged iron pipe several feet from the tunnel-head, feeding the charges through the pipe, and collecting the gases from the annular space left outside of it. In a passage thus made, both much narrower than before, and cylindrical in place of conical, the tendency of the materials to arch and jam is so much increased, that the furnace must often lose, from these causes, the whole beneficial effect of the pressure of six or eight feet of its contents, a loss of itself apparently sufficient to account for all the accidents of scaffolding mentioned in our correspondent's letter. The serious effects upon both the yield and burden, produced by even slight alterations of the height and diameter of the upper part of a furnace are well known to iron-masters; many singular results of the experience on this subject in the Scotch and Staffordshire iron districts are recorded by Mr. Thompson in the *Transactions of the Glasgow Philosophical Society.* By drawing off the gases through lateral flues near the top of the stack, in the manner originally practised in Germany, the previous form of the furnace can be preserved unchanged, and under such circumstances only can a fair trial of the merits of the system be expected. The application of the waste flame to heating the blast has, in this country, been in general use almost as long as the hot blast itself, and we believe that it has, for several years, been successfully applied to raising steam. We hope, therefore, that some of our own manufacturers will favour us with results of their experience on this interesting subject."

RECENT AMERICAN PATENTS.

IMPROVED STEAM-BOILER.—R. E. Dibble says—"The object of my invention is to maintain a constant and rapid circulation of the water in a tubular steam-boiler, through the tubes and through a series of water vessels, which depend from the roof of the fire box, and expose a very large surface to the direct action of the fire. *Claim.*—What I claim as my invention, is the arrangement of pendent water vessels in the fire box, in combination with water tubes which pass along the flue, and are connected at one extremity with a water space near the back of the boiler, and at the other with the water vessels at the fire box, substantially as herein set forth."

REGISTER FOR STEAM-BOILERS.—J. D. Rice says—"The nature of my invention consists in connecting a registering apparatus, combined with a steam pressure gauge and water line gauge, to the gauge line of steam-boilers, in such manner as, by opening and closing the gauge cocks, the pressure of steam and the height of water of steam-boilers, and also the intervals of time elapsing between trying the gauge cocks, shall be registered upon paper or other suitable material. *Claim.*—What I claim as my invention, is connecting the gauge rods with the gauge cocks in such manner as herein described, that the pressure of steam and height of water shall be registered each time the gauge cocks are tried, the register indicating at the same time the period of time of trying the gauge cocks by opening and closing them."

MACHINE FOR CUTTING SHEET METAL, &c.—S. P. Ruggles says—"What I claim as my invention, is the toothed rack or its equivalent, applied to the bar, and a system of one or more gears, or the mechanical equivalents thereof, applied to the cutter wheel, and made to engage with the said racks or equivalents thereof, in combination with the said bar, the cutter wheel and its sliding carriage, the same being substantially in the manner as above described, and for the purpose of causing the cutting periphery of the rotary knife to travel around faster than the knife moves horizontally, and thereby to make said knife cut with a drawing stroke. I also claim the combination of the swinging frame and gauge contrivance, or equivalents thereof, with a sliding carriage, its cutter wheel, and the slide bar and straight cutting edge, as substantially specified, the same being for the purpose of enabling me to cut either circular or curved work, as described, and of any diameter, or dimensions capable of being produced by the machine, of whatever size it may be made."

ELECTRIC TELEGRAPH MANIPULATORS.—A. F. Park says—"The nature of my invention consists in arranging machinery for closing and breaking an electric telegraph circuit in transmitting intelligence, whereby the operator, by giving a finger key one instantaneous touch, as distinguished from the prolonged touch applied to the key in ordinary machines, closes and breaks the electric circuit, at and during such time as is required to signal or record a telegraphic sign for a letter, figure, or other character. *Claim.*—What I claim as my invention is—1. The two guides with their hook and detent spring as described, in combination with the moveable connecting points and the type forms for letters, substantially in the manner and for the purpose set forth, the guides being disconnected as soon as the moveable connecting point has passed them, thereby causing the finger key rods to resume their proper position to be again acted upon, and allowing the succeeding points to pass in their regular revolving course without coming in contact with the type forms.—2. I also claim the manner of disconnecting the two guides—viz.: by the action of the moveable connecting point upon the detent spring, as above described.—3. I claim the employment of a clicking apparatus to indicate the proper time of depressing the keys, the whole being constructed and arranged in the manner and for the purpose substantially as herein set forth."

DIRECT ACTION STEAM-HAMMER.—S. V. Merrick says—"My invention is an improvement on the steam hammer of James Nasmyth, of Great Britain, whose hammer is operated by, and is attached to, the piston rod of the steam-piston, a spring being interposed between the said hammer and piston rod, to prevent as much as possible the upsetting of the said piston rod by the percussive action of the hammer. The object of my invention is to avoid the difficulty and inconvenience of interposing such spring, or the very injurious effects of the percussion, when the hammer is attached to the piston rod, without the interposition of a spring. To this end, the nature of my invention consists in combining the hammer with the moveable cylinder, the steam being admitted and discharged to and from the moveable sliding steam cylinder. *Claim.*—What I claim as my invention, is attaching the hammer to the sliding steam-cylinder, substantially as herein described, the steam being admitted and discharged to and from the sliding steam-cylinder, substantially as described."

MANUFACTURE OF LEAD PIPE.—W. P. Tatham says—"What I claim as my invention, is the method substantially as described, of setting or cooling the inside of the mass of metal within and throughout the length of the cylinder, and before or preparatory to pressing out the pipe, by passing a cooling fluid into or through a long core or core-holder extending through the length of the cylinder, as described, the said method having the effect at the same time to keep the said core or core-holder cool and stiff, as described."

EXHAUST PASSAGES FOR STEAM-CYLINDERS.—G. Shield says—"What I claim as new is the twofold outlet or steam passage from the cylinder into the exhaust valve chamber, which admits the steam above and below, and discharges it between the disks of the exhaust balance valve, and thus facilitates the insertion, withdrawal, and adaptation to the exhaust side in the line of its stem, or spindle of a balance valve, whose disks are cast in one piece, and are held down to their seats by the stress of steam."

IMPROVEMENTS IN MANUFACTURING SLATE.—Mr. E. J. J. Dixon, of the Royal Slate Quarries, Bryntafood, near Bangor, North Wales, has patented some improvements in the manufacture of sinks and other articles of slate and stone. The machinery employed by Mr. Dixon for reducing the rough blocks previous to their being manufactured, consists of a set of saws from 10 to 18 feet long, attached to the sides of a beam of 45 feet in length and 1 foot square, to which an alternating movement is communicated by suitable cranked gearing. This beam is supported on rollers which have their bearings on levers whose fulcrum is in the framing of the machine; it is also guided laterally by rollers longer than the beam is deep. Connected to each of the free ends of the levers is a rod, the upper end of which is attached to a second lever, on which slides a counterweight: this serves to balance the saw-beam, and by adjusting this weight, the saws may be raised to admit the blocks of stone, and their pressure on the stone while cutting may also be regulated at pleasure. A pipe, furnished with cocks, runs the length of the beam, and supplies water to the saws, which may be either toothed or plain—in which latter case, however, sand is requisite to assist their cutting. A modification of this machine consists in making the bed moveable, and this is more particularly adapted to the sawing of large blocks. Another form of machine is described, in which a circular saw is employed; this saw is keyed on a shaft, which is so centred as to be capable of moving in a circular orbit—thus affording great facilities for cutting blocks which are not easily moved. When the blocks have been reduced to a proper size, they are submitted to the operation of hollowing out the trough, in case sinks are desired to be made. This is effected by means of cutters screwed or keyed into a box on the end of a revolving shaft—the stone being brought up to them on a bed moved by a winch. A machine is next described for rebating stone for various purposes, such as to receive gratings, &c. After this we have descriptions of improved slate ridges for roofs, constructed of three pieces, two placed at an angle covered by the third piece; of a method of securing sinks in pavement, and also the paving slabs to each other, which consists in sinking corresponding curfs in the abutting ends and sides of the slabs, into which are introduced small plates of metal, whereby an even surface of the pavement is effectually secured; of a method of forming chimney-tops, in which an ornamental metal ring serves to secure one end of the chimney-pot, composed of four slabs of slate, while the lower end is bound together with hoop-iron until embedded in the masonry of the chimney it is intended to surmount. Lastly, Mr. Dixon specifies an improvement in the construction of the tops of washstands, which consists in adapting to the rebate on which the edges of the bason rest a ring or washer of gutta percha or Indian rubber; and in copying and napkin or linen presses, in which the pressure is effected by raising the plate of stone on which are laid the articles requiring compression. The upper plate of napkin presses is hollowed out and filled with water, which, by keeping the under surface of the plate damp is stated to be of advantage.

Mr. Sabbon, assistant-surgeon of Portsmouth Dockyard, is said to have discovered a method for preventing corrosion, oxidation, &c., of iron tanks, shot, &c. The process is by means of a covering of zinc, and is extremely simple as well as inexpensive, taking into consideration the immense destruction and corrosion from oxidation, more particularly in ships' tanks, which are now constantly requiring cleaning out and repairing. The perfect success of this invention can only be safely tested by time; at present, however, it has received the most favourable opinion of scientific men.

Mr. Henry Fowler, C.E. (brother of Mr. John Fowler, engineer of the Manchester, Sheffield, and Lincolnshire Railway) has, with Mr. W. H. Favell, obtained the first contract (from Bombay to Tannah) of the Great Indian Peninsular Railway. Mr. Fowler will at once depart for Bombay to commence the works, and will be followed by a numerous staff and the requisite plant.

Original Correspondence.

CHANCERY REFORM.

SIR,—In reply to your correspondents, "G. & C.," whose letter appeared in last Saturday's *Mining Journal* (whilst commiserating the unenviable position of the expectant legatees), I may observe that the communication is but one of many similar awful statements of Chancery delays brought within my notice; and notwithstanding that *the three plaintiffs in the suit, as well as one of the executors, and the Master to whom it was referred, have, during the progress of the cause, died*, nevertheless the suit may be deemed merely in its *infancy*; because your correspondents state that *the bill was filed* about only 10 years back, and that space of time, it may be stated, is but a *minimum* phase in a Chancery suit. In answer, however, to the query put, *it is not imperative* upon the surviving executor to revive the suit; therefore, the better mode would, perhaps, be for some of the parties interested to direct their solicitor to instruct counsel to move the Court for leave to revive the suit, and conduct the cause.

Serle's-chambers, Lincoln's Inn, Dec. 20. CHARLES EGAN,
Author of the *Letters on Delays in the Court of Chancery*.

PATENT LAW—NATURAL RIGHT OF INVENTORS.

SIR,—Your liberal aid, under circumstances less encouraging than are the present, in behalf of an amendment in our Patent Laws, induces me to ask your inserting of the annexed observations, which appeared in the *Mechanics' Magazine* of the 30th of November, and which, as will be seen, endeavours to substantiate a very different relation between inventors and the public to that which I have endeavoured to prove is the true ground upon which are based the best interests of society, and on which inventors must rely for that fair and equitable recompense to which they are entitled, as a reward for the anxiety, labour, thought, and expense attendant upon the production of useful inventions. I shall in this letter confine myself to an examination of the propositions enunciated in the article in question, which are as follows:—

(1.) A great outcry has been recently raised against our Patent Laws, because they will not allow people to make their inventions public without forfeiting their right to patent them. (2.) Essentially this amounts to affirming what has heretofore been considered as one of the most unreasonable of all unreasonable things—namely, that one may have his cake and eat it too; (3.) For the principle on which all grants, or of patents, are founded—not in this country alone, but throughout the civilised world—is that where a party is in possession of a secret in art or manufacture, by which the good of the community to which he belongs may be promoted, it is good policy in that community to get the secret out of him by granting him a temporary monopoly of its "use and exercise" for a limited period. (4.) No secret—no patent. The notion of there being any natural right to property in inventions has been long ignored by all sound publicists. (5.) Right, in this case, there is none beyond what society for its own sake confers (6.), and whether the monopoly should be for 7, 14, 21, or any other limited number of years, depends simply on a calculation of the average amount of bounty necessary to induce people to invent all they can, and publish all they know.

In answer to the first of these propositions, I remark that the outcry against the Patent Laws is not exclusively or mainly on account of the forfeiture of the right of patent by previous publication. It is against the enormous tax paid to obtain the worst of titles under which alone the inventor can labour with any security against robbery, both of merit and reward, even whilst he is maturing his invention, and to the costliness of the means of defence against a host of pirates, which such dearly-bought title must depend upon. It is, in short, the whole, and not a part of the barbarous and unnatural penalties inflicted by the present Patent Laws upon inventors, against which the outcry is raised. Proposition 2 may be pretty; but is inapt when applied to the case in question, as he who publishes his invention is not benefitted as he who eats his cake; therefore, the comparison does not hold good. Propositions 3, 4, 5, and 6, announce the fundamental principle upon which all writers rely, whose aim is to abridge even the small share of benefit which inventors at present enjoy from the fruits of their labours. This fundamental principle, as they assert, is that the fruits of the labour of invention are public property; and, judging from what is said in proof of such assertion, though it be little, it would seem as if they think that nation acts the most magnanimously which so frames its laws as most cunningly to get inventors' secrets out of them, with the reservation to the inventor of the least possible advantage. Truly, in this particular, then, England is a wise and understanding nation. She has in her Patent Laws greater cause for self-gratulation than any nation on earth. But to the arguments brought to establish this communistic doctrine, they amount to this—First, that inventors have not yet in any country got a formal and public admission of such right granted; but in all countries, except England, even the enacted laws have approximated considerably nearer to this right than even, I fear, the public opinion here has done. The second argument is that all sound publicists have long ago ignored such right. Who are the sound publicists here alluded to; or of what age, and from what premises, or by what kind of reasoning, they arrived at this ignoration of natural personal right in the labour of invention, we are not informed, nor am I very curious in inquiring.

But we will pass on to try the question upon its own merits. That the grosser kinds of property should be first recognised as personal property we can easily understand, and that the property produced by mental labour should scarcely be recognised in early times, is what most who reflect upon the matter would be led to expect. But the principle of natural right, like most other principles, though the same in itself from the first, yet it presents to the national mind different phases as intelligence and civilisation advance. To assist in this inquiry, it is desirable to take one of those cases where the natural right to personal property has long been granted; and also, in order to get rid of the artificial complexity which attaches to the question in old countries, or barbarous times, I will adduce an example in connection with what is now taking place in the United States of America. In that country an absolute title in land is conferred, for a mere nominal sum, to those who will undertake to give its productions the essence of property—that is, bring something which the land will produce into that relation to the wants of mankind, so that it shall benefit the producer and the consumer. Now, it is obvious that the land, in this case, stands in the same relation to the productive labour of him who obtains the title, as do the elements about which the labour of invention is employed to the inventor. But I suppose the publicists alluded to would tell me that no man can have a natural right to any of the elements about which invention is employed? I grant it, and ask the publicists if they do not see that no man can have a natural personal right to land, abstractedly considered as land, for, thus viewed, it is like all material matter, common to all men? Again, therefore, I repeat it, land stands in the same relation to the American proprietor and cultivator as the elements about which the labour of invention is employed do to the inventor, and that neither can be claimed as personal property under natural right, but that the property, and with it the natural right thereto, arises from labour, or previously-acquired property being expended upon both the one and the other—that is, both the land and the elements of invention; thus giving the essence of property to that which before was worthless to mankind; and so, by rendering it suitable for the supply of their wants, induce them to give the inventor and the cultivator, in exchange for it, a profit upon its cost, which alone is the privilege inventors and cultivators get for the capital, labour, and risk they incur. If the profit be great, so much the better for mankind, inasmuch as it evidences the opening of a copious spring of wealth, which before was sealed against their wants.

But it will, I have no doubt, be further urged, that if any particular inventor had not last month discovered and converted into property that which before was not property, that this month it would have been discovered and converted into property by some one else. It is very unfortunate for those who deny justice to inventors that this argument, if good for anything, is as good, and far more likely to be true, if applied to the case of land as to invention, as another cultivator of the soil is a matter of much greater certainty than another discoverer of Nature's secrets in the case of invention. This is so self-evident, that I will simply call attention to the fact, that the elements about which invention is employed have been under the notice of mankind ever since its creation; hence the lateness of discovery shows how rare are the labourers that successfully labour in the field of useful discovery, and practically succeed in widening the field which supports mankind.

I shall be told, perhaps, that when inventions are perfected, and their value to mankind made apparent, that *then* after laborious study, great expense, long and painful anxiety, which the best inventions require from those who surmount only the physical difficulties (which, after all, form the least part of the task in many cases, as it not unfrequently happens that inventors have more to encounter in convincing their fellow-creatures that what they are offering them is worth their acceptance than even in bringing about its production); yet the generosity of those who deny natural justice to inventors, prompts them to say that when the spring is once set agoing, and the public convinced that the product is pleasant to the taste, and to be desired to make them rich, then the public can find men who will, at least, *promise* to keep the stream of wealth in motion at a fraction less cost to society than the inventor would demand for so doing; hence they exclaim against what they choose to designate the monopoly of inventors; but when they are prepared to give up the property to public confiscation, then will it be consistent in them to demand that inventors should do so likewise.

Furthermore, these men are very short-sighted political economists—if any one should think charity demands such a construction to be put upon their motives. Let them look at the effect of their principles, if carried out, in the case of the American land. Suppose the American nation could repossess its reclaimed lands, can the men who reason thus any more doubt in this case than in that of invention, but that the land in its reclaimed state would give a fraction more to American society, just as in the case of the property of inventors here? But do these men not also see that by so much as the American public robbed those that had reclaimed its land, just by so much it would retard the reclamation of its other waste land? The truth in this matter is, there is no halting here between two opinions. But if communism be true, then follow it consistently; but if personal property be the ordained law of our Creator, as manifested by the constitution he has given us, as I firmly believe, it is then we shall find this natural right where he has placed it—viz.: in that power which all men have in labour of mind and body, and by which they give to material matter the essence of property; hence the instinctive solution of this matter, which involuntarily rises in the breast of all men, that next to consciousness nothing is so much naturally their own as the fruits of their labour. No other definition of property will obliterate this; no, not even that of the soundest publicists. T. CRADDOCK.

Ranelagh Works, Pimlico, Dec. 10.

THE ELECTRIC LIGHT—INFRINGEMENT OF PATENT.

SIR,—Your correspondent, though evidently impatient of contradiction does not attempt, in the slightest degree, to grapple logically with my counter statement concerning the true origin of the electric light, and the utter absurdity of Mr. Allman's pretensions. This circumstance, I presume, arises from a very sufficient reason; the same, in fact, which imposes silence upon his friends in Paris, Frankfort, Liverpool, and Manchester. He is pleased to term me "indiscreet!" Very possibly I may be so, but among my indiscretions is not to be numbered that of assuming a position in argument which I am *unable to maintain*. Mr. Allman, and those with whom he is connected, inform the public, through the medium of a printed circular, that "*the only case* in which they had heard of the application of the current in the direct regulation of the electrodes was by a plan of M. Archereau, of Paris, which they believed he had abandoned." Had they, then, seen none of the numerous notices which appeared in the public press, two years back, concerning Mr. Staite's invention, or does it suit their purpose to forget them? I think that any, the most prejudiced person, who will peruse those notices—numerous, emphatic, and unequivocal as they are—must acknowledge that a very gross attempt to deceive the public has been made by Mr. Allman, and I am surprised that the Polytechnic Institution should have lent itself to the publication of so glaring a piracy. Mr. Pepper, one of the lecturers at that institution, is fully aware that Mr. Staite's claims to the self-regulating apparatus are undoubted, as he himself delivered lectures highly laudatory of this very system of magnetic regulation. I have only to refer, in proof, to your own paper of the 18th Nov., 1848. As to Messrs. Staite and Petrie's proceedings for an injunction, those gentlemen are quite capable of taking care of their own interest, but I imagine they will hardly think it necessary to put themselves to any expense to stop a piracy, not likely to prove profitable to the party pirating. Should, however, Mr. Allman attempt to deal commercially with the invention, those gentlemen will have little difficulty in proving Mr. Allman's patent to be worthless. Dr. Murray, in your Journal of January 6 and 13, 1849, spoke highly of Mr. Staite's invention. I am somewhat surprised that the learned doctor has not condescended to express his opinions on this question of piracy; sure I am that his well-known impartiality would have great weight with your readers. There can be no doubt, after exposing such a case as this, of the necessity of reform of the Patent Laws. It is really shameful that persons who have devoted so much time and money, and brought so much ability to bear on a subject of general interest, should be annoyed by rival claims, so utterly groundless in novelty or invention, and that the columns of your valuable Journal should be made the medium of injustice and injury by the pretensions of one who, though well known as a dabbler in patents, has never practically succeeded in any one of them. This last patent is the very first in which he has assumed the slightest knowledge of electricity.

[Here follows an enumeration of the opinions from various scientific journals as to the interest, value, and originality of Mr. Staite's invention—among which we may mention the *Times*, *Chronicle*, *Post*, the *Mining Journal*, *Illustrated London News*, the *Chemist*, concluding with the following from the *Courrier Français*, of the 4th Feb., 1849:—

"Our learned brother, M. Foncault, has clearly demonstrated to the readers of the scientific portion of the *Courrier Français*, the extraordinary brilliancy of the light produced of late years from the currents of electricity, obtained by means of the galvanic battery and charcoal points in a vacuum. Nothing was wanting to make this light (which may be compared to that of the sun) applicable to light-house and navy signals, but to overcome the irregularity of the axis of light, and the perpetually varying distances of the charcoal points continually operated upon and altered by the electric current. This question having been brought before the society for the encouragement of science, we are informed that an English engineer, named Staite (whose experiments on the subject were laid before the Academy of Sciences, and proved to be long anterior in date to those of M. Foncault in France), has accomplished this object, and of which the mechanical journals of the society have given the fullest details, with drawings of the lamp, and the means by which the electric current is controlled. We are informed that Mr. Petrie has assisted Mr. Staite, and is equally interested in the patent which he obtained for the use of this invention in France. M. Peligot has made a report to the society, by which it appears that the means previously adopted by Messrs. Staite and Petrie are the same as those subsequently applied by M. Foncault. In each instance they consist of an electric coil or helix, by means of which the charcoal points are brought near, or separated, according to the varying force of the galvanic current. M. Dumas felt himself bound to declare, with his well-known impartiality, that his report on the apparatus of M. Foncault, which it was his duty to send in to the Secretary of Sciences, ought not in any way to prejudice the question of priority, but that the rights of the first inventors must be dealt with with strict justice by the council of the society. M. Dumas has added to M. Peligot's report some very ingenious suggestions for the application of the electric light to shipping, and the prevention of shipwreck, embracing a comprehensive view of the immense advantages which the electric light offered for such purposes, not only on account of its brilliancy and immediate application, but its total independence of accidents from wind or wave. It appears that the mechanism of Messrs. Staite and Petrie's lamp enables them to produce at will every combination of signal lights, as at present used in light-houses, or on ship-board, and under the same complete control. It has, therefore, gone far beyond mere continuity and permanence, with uniformity. They have made and placed both under control; there remains nothing more for invention. It is necessary to add more—the French invent more frequently than the English. We have, therefore, every thing to gain by giving an example of strict impartiality, and of the acknowledgment of their right of priority of invention when it is really due; besides, ought we not to be just, before any other consideration?"] BETA.

TINMEN'S WAGES.—The disputes between Mr. Perry and his workmen, at Wolverhampton, noticed by us some weeks since, have not abated, as we observe in a local journal that fresh cases have been brought before the magistrates. In one instance Mr. Perry, after an adjourned hearing, had paid the full demand of the tin-plate worker, but the payment of expenses was remitted. In another case, heard last week, Charles Haynes summoned Mr. Perry for non-payment of wages, the prices he received for making a certain description of coal-vases being below that paid by two other manufacturers in the town. The only question was, what was to be understood by "town's prices," and this point was not cleared up by the witnesses, since it appeared that the prices paid for making similar articles were rarely alike, the foreman of Mr. Perry stating that the price agreed to be paid to the plaintiff was the same as was paid to the other workmen. The bench decided that there was no ground to make an order for payment on a higher scale, and the summons was dismissed; the expenses of Mr. Perry, however, were refused, one of the magistrates observing that there were faults on both sides, which, to judge from the frequency of these feuds between manufacturers and workmen, is manifestly the case.

THE IRONSTONE OF CLEVELAND.—Ironstone abounds on this coast, and has been extensively shipped to Newcastle, and inland ironworks were formerly established at Bilsdale. Bransdale, Rosedale, and probably some other of the dales, contain quantities of the ironstone, although at present in disuse. The vast heaps of iron slag, and numerous remains of ancient works, prove that much iron must have formerly been produced there. There are also appearances in these dales of charcoal having been prepared largely for these purposes; but when the works were carried on no records remain to show. However, an *inspeximus*, dated at York, Febuary 26, 2 Edward III. (1328), recites the grant of a meadow in Rosedale, called Baggathwaite, to the nuns, by Robert de Stuteville, originally given by that family, A.D. 1209, whence it is evident that iron was worked in Rosedale at a very early period. The principal repositories of the mineral are above the grey limestone, and below the upper *lias* or alum shale. It is at present of little value except as ballast, and is scarcely of sufficient importance to encourage speculation.—*Ord's History of Cleveland.*—[The right of working the ironstone in the Cleveland Hills, near Eston Nab, has been granted by the proprietors to Messrs. Bolckow and Vaughan, of Witton Park and Middlesborough, eminent ironmasters and manufacturers, who are laying down a tramway to their works, which will place the mines in railway communication with the whole kingdom.—*Gateshead Observer.*]

COMPANIES PROCEEDING UNDER THE WINDING-UP ACT.

WHEAL CURTIS COPPER MINING COMPANY.—This company is the first the affairs of which will be wound up under the Joint-Stock Companies' Winding-up Act, the call made by his honour Master Brougham of 7s. 6d. per share, to defray liabilities, having been pretty fully responded to. The company, as our readers are aware, was established for working mines in Cornwall, with a capital of 22,500*l.*, being the sum on 5000 shares, at 4*l.* per share, raised. About 1000 shares, free of deposit, were allotted to Mr. Pilkington, the projector, who with two of the other directors, the petitioner for winding-up alleges, is now abroad, and not likely again to return to this country. Proceedings were taken for debts incurred against the directors in the Court of Stannaries and other places, and upwards of 3500*l.* were sunk in mining operations. The official manager has paid off debts, under the direction of the Master, to the extent of 1050*l.*; and his statement of account under the estate shows that the amount of debt due to the company's ledger was 2538*l.*; the amount of call at 7s. 6d. per share, 1089*l.*; the amount cleared on set off, 425*l.*; balance in favour, after debit of call and credit of set off, 3202*l.*; the amount of cash received by official manager, 788*l.*; the balance remaining due to the company, 2414*l.*; balance remaining due to the contributories, 44*l.* The per centage due in lieu of all fees in respect of proceeding under the Winding-up Act has been paid into the Bank of England, to the credit of the suitors' fee fund.

NORTHER COAL MINING COMPANY.—Yesterday the meeting before Master Tinney was to settle the list of contributories in this company, the liabilities of which amount to 150,000*l.* Mr. Wilcox appeared as counsel for Mr. Williams, who was sought to be placed on the list for 30 shares, which he had disposed of in 1847 to a Mr. Wood, and had executed a transfer of them to that person, who now repudiated the purchase, as having been made by a friend in his name, without his authority. The transfer appeared to have been executed by the secretary of the company, who was examined as Wood's attorney, though he had no authority from Wood, and acted under a misconception. Mr. Galsworthy, counsel for Mr. Quilter, official manager, cited in support of his case "*Ex parte* Hennessy," in the St. George's Steam-packet Company, and contended that as the transfer was a nullity, Mr. Williams, the transferor, must be liable. His Honour took time to consider. Another of the company's collieries has just been disposed of, and realised the expected price.

OUNDLE BREWING COMPANY.—The first list of contributories has been settled by Master Richards, the other lists being adjourned for further evidence.

INDIA AND AUSTRALIA STEAM-PACKET COMPANY.—Yesterday, the claim of Mr. Scott Russell, the engineer, for 285*l.*, against the company, was allowed by Master Blunt, and other claims, about 300*l.* or 400*l.*, were admitted.

ST. GEORGE'S STEAM-PACKET COMPANY.—The proceedings have been instituted on the petition of J. Pim, of Dublin, E. Pike, of Cork; A. Wood, of Bury; J. Potter, of Manchester; E. Cropper, of Liverpool; and T. B. Crewsdon, of Kendal, banker, who were members of the committee appointed to dissolve the company, and who state that it was established in 1833, for the plying of steamers between Cork and Liverpool, with a capital of 200,000*l.*, in 2000 shares of 100*l.* each. There were between 100 and 200 shareholders, with offices in Cork, Dublin, and Liverpool, the boats being run between the ports of England, Ireland, and the continent of Europe. New vessels and further capital being required in 1836 for the purposes of trade, the capital was increased to 400,000*l.* by the issue of 2000 shares of 100*l.*, with power to borrow 100,000*l.* Shares to the extent of 57,000*l.* were issued, and sums borrowed from time to time, and this continued to 1843, during which time the company divided large alleged profits, but then became embarrassed. To defray debts and engagements the directors made a first call of 50*l.* per share, which produced 35,420*l.*, and then a second call of 60*l.* per share, which produced 38,000*l.*, but the petitioners state that there was, nevertheless, upwards of 35,000*l.* outstanding, a large portion of which they had paid out of their own pockets. Since the company had been under the operation of the Winding-up Act, his honour has ordered two calls per share, one of 100*l.*, and a second of 35*l.*, which have been made upon the shareholders, and under these calls a sum of 40,000*l.* has been collected to defray liabilities and claims of creditors. The company is almost the first that came under the Act, and the result is looked upon as a fair criterion of its successful operation.

LIVERPOOL MARINE ASSURANCE COMPANY.—Sir George Rose has appointed Mr. G. Hatton official manager to wind up this company's affairs, on the petition of Mr. Nichol, merchant, Liverpool, who states that the undertaking was started in 1831, with a capital of 200,000*l.*, in 2000 shares of 100*l.* each, for transacting all the business connected with marine underwriting. The company continued until November, 1849, and various large sums were divided among the shareholders on account of profits. The petitioner alleges that, from the nature of the underwriting business, considerable time frequently elapses before the extent of losses sustained by underwriters becomes known; that the three years preceding 1849 were very disastrous to the company, and that in making up the accounts in the autumn of that year the directors ascertained that the losses of the company had exhausted the whole surplus fund, and also all the premium moneys, funds in hand, and paid-up capital, and that, in addition, it would be neccessary to make considerable calls to defray liabilities. Three successive calls were made to discharge debts, but as they were very inadequately paid by the shareholders, a large amount of liabilities remains outstanding at this time, which can only be paid off under the provisions of the Winding-up Act.

LONDON, BIRMINGHAM, AND BUCKINGHAMSHIRE RAILWAY.—Master Kindersley has refused for the present to allow a claim of 1555*l.* brought in against this estate, for advertising the prospectus of the company, and paragraphing it in the papers, on the ground that, owing to the present very unsettled state of the law of liability on these matters, he cannot see exactly what company there is to be wound up, or what contributories there are to be made liable to liquidate alleged debts. His Honour, in commenting on the present position of the law of liability in connexion with the winding up of railway and other companies, observed that he never saw such a state of law in his life. The real truth appeared to be, that in entering into engagements with engineers, surveyors, and advertising agents, the liabilities incurred were more the liabilities of the individuals who made the contracts for the work than the liabilities of any company. It appeared from the evidence that several of the provisional committee in this company paid between 100*l.* and 200*l.* each to the solicitor, to repay the debts incurred. One of them who had done so deposes that about a year after he had considered the whole business at an end, a satellite of the law knocked at his door, and on being admitted to an interview, handed a note saying, "This, sir, is for you." Witness, on opening it, found enclosed a writ, for 1400*l.* Having never seen a writ in his life before, witness asked the bearer what it meant? when the latter smilingly replied, "Really I don't exactly know, but I think it is for the London, Birmingham, and Bucks Railway. I have been presenting several of them this morning."

BARNET AND NORTH METROPOLITAN.—On Thursday the members of the provisional committee, who had been placed by Master Tinney on the list of contributories, as liable, were summoned to show cause why they should not pay a call of 50*l.* per share, in discharge of costs and liabilities. Mr. Roxburgbe, who attended as counsel for Mr. Nicholay (of Oxford-street) and others of the provisional committee, who accepted 100 shares each, opposed the declaration of the proposed call, on the ground that at present there were no debts against the estate, either proved or ascertained, and that any call, if made, should not be a gross call, but a *pro ratâ* one per share on the members of the provisional committee. Mr. Hughes, solicitor to Mr. Norris, the official manager, said the proposed call was sought to be made to give the official manager a sort of indemnity fund to provide against the costs of appeal to the House of Lords and other matters, and not for costs out of pocket, and the produce of the call would be paid into the Bank of England, subject to the control of the Master. There was a debt of 800*l.* amongst others, for printing and stationery, and the solicitor of the company proposed to send in a bill of costs for 1000*l.* After considerable discussion, in which his Honour intimated an opinion that the costs incurred should be first ascertained before a call was made, the proposition for making it was adjourned *sine die*.

CHEPSTOW, FOREST OF DEAN, AND GLOUCESTER.—This company was projected in 1845, with a capital of 600,000*l.* in 30,000 shares of 20*l.* each: a large number were allotted, and the deposit of 2*l.* 2*s.* paid thereon, amounting to 65,000*l.*, received by the members of the committee of management.—Sir W. Twysden, Sir W. Johnston, Major White, Messrs. Lawton, Hall, Andrew, Colman, Fitzwilliam, Morrison, and Beadon. Expenses were incurred in going to Parliament, after which the company was dissolved, and a sum of 28*s.* per share was returned to the shareholders, who, on having their scrip cancelled, signed a release. No accounts, however, of the receipts and payments had been made; and at the time the 28*s.* was returned it was represented by the secretary that there was a sum of 12,000*l.* in hand, which would give a still further return, which as yet had never been made. The proportion of the deposit thus retained for expenses was 22,000*l.*, although the projected railway was only 28 miles long; but it is alleged that 11,000*l.* of this amount, instead of being redistributed among the subscribers, was applied in the promotion of another preliminary scheme, which also turned out abortive. The petitioners, therefore, pray that, as debts are outstanding, an inquiry may be made into the matter. Mr. Fitzwilliam, the only one of the managing committee who appeared out of those summoned, was examined to show that large sums of money had been paid by cheques to defray the liabilities of the company. Subsequently Mr. Terrell, who appeared as counsel for several of the directors, and Messrs. A'Beckett and Simpson, solicitors, intimated that it was the intention of those gentlemen to present a petition to the Court to rescind the order to wind up, on the ground that there was no company to wind up. Mr. Glasse counsel for the official manager, and Mr. Adron, having contended to the contrary that there were debts outstanding, the case was adjourned, it being stated by the solicitor to the official manager that one or more of the directors were now in Australia.

MIDLAND GRAND JUNCTION.—The petition of Mr. C. R. Colman, of His h-

street, Wapping, states that the company was started with a projected capital of 600,000*l.*, in 30,000 shares of 20*l.* each, and a deposit of 2*l.* 2s., to run from Stafford and unite the midland counties. A large number of shares was allotted and the deposit paid, and subsequently a return of 1*l.* 1s. per share was made to some of the shareholders, and a somewhat larger sum was made to a few others; but the petitioner alleges that no return has been made to him, and that the persons who were the directors either have in their hands or are accountable for a large sum of money belonging to the shareholders, there being outstanding liabilities and engagements in addition thereto.

MIDLAND UNION.—Master Tinny has appointed Mr. R. P. Harding official manager; the liabilities are alleged to amount to 80,000*l.*

LONDON AND BIRMINGHAM EXTENSION.—It has been agreed to submit to the determination of a referee the amount to which the engineer would be entitled in respect of an alleged claim of 11,000*l.*

Several new companies have been referred by the Court to the Masters in Chancery, to be wound-up, but they cannot be proceeded with this term, as the Masters' Courts are full, independently of the fact of not one of the 130 companies under the operation of the Winding-up Act having yet been finally wound up. His Honour, Master Brougham, has declined to make a call specially for payment of the costs of winding-up, being of opinion that a first call to be made under any estate should be to pay the claims of the creditors. It is understood that the St. George's Steam-packet Company, whose vessels plied for a length of time between Cork, Liverpool, and the European ports, is wound up so far as the payment of creditors is concerned, and that out of the two calls of 100*l.* per share and 35*l.* per share, made on the shareholders to defray liabilities, a sum of 40,000*l.* has been collected. The new Master in Chancery, Humphry, will, as junior master, sit for the dispatch of business during vacation.

NAMUR AND LIEGE RAILWAY.

The fifth annual meeting of this company was held on Monday, at the London Tavern, Bishopsgate-street,—R. M. BATES, Esq., in the chair.—The report was read by Mr. GRANT (the secretary), and was looked upon as highly satisfactory.

The CHAIRMAN said, the line was now open for the conveyance of passengers and light goods; but they would be soon able to carry goods of every description. The directors had no doubt but the estimate of revenue, given in April, 1847, would prove as correct with respect to the traffic on the Namur and Liege line as it had on the Mons and Manage line. No doubt a considerable increase in the receipts would shortly take place, which would be greatly promoted by the Exhibition of 1851. The working plant was now supplied by the manufacturers on terms which enabled the company to spread the payment over a period of six years; and, as all the engines and carriages were of the best description, the directors did not expect any expense for repairs for a long time. Great delay had taken place in the construction of the branch at Mons; but the directors fully expected it would be opened next month. (Hear, hear.) At present the gross receipts were about 700*l.* a week. (Applause.) It was the intention of the directors to publish the traffic returns monthly, which would, no doubt, be more satisfactory to the proprietors. (Hear, hear.) He concluded by moving the adoption of the report and accounts.

Sir FREDERICK SMITH (a director) said, the report had gone into all the circumstances of their position so fully that little remained for him to say but to second the report. Having very recently been over the whole of the lines in Belgium, it might be desirable that they should know the opinion of one who was a practical man in such matters. (Hear.) Amongst all the lines here and abroad he had never seen a line constructed like that of the Namur and Liege, the elements of which were the beauty of the works, the soundness of their construction, and their appearance of long duration. He could also speak of the highly efficient state of the works of the Mons and Manage line, under the management of Mr. Stooks. (Hear, hear.) The directors, anxious to provide against difficulties, had agreed to contract for the permanent way, and that by means of public tender, a principle which the board intended to pursue, with a view to arrive at the most economical arrangements. (Hear, hear.) The Mons and Menage works might by this means not be confined to contractors abroad, but extended to those in this country. Within a short time he expected that no competition would be offered them, and that they would obtain the whole traffic on the Mense. The hon. proprietor not only congratulated himself, but also those shareholders who had come into the undertaking.

A PROPRIETOR asked if the accounts were audited?

The CHAIRMAN replied, that the accounts were submitted to the Belgian Government. No auditor was appointed, but the books were always open to the inspection of the shareholders for a certain period after those accounts were published.

Mr. RIGBY complimented the directors on the success of their labours. He begged the shareholders to look at their large number of forfeited shares, namely 23,405, as so much dividend in their pockets. (Hear, hear.)

Mr. WILLIS spoke highly of the prospects of this line. Its traffic was likely to be enormous. If they took only 100*l.* a week it would give them 1 per cent. dividend. (Hear.) In less than two months he fully expected to see the Mons and Manage line realising 1030*l.* a week—a line only 22 miles in length, and costing but 200,000*l.* or 300,000*l.*

Mr. HARRISON asked in what way the back interest was intended to be paid?

The CHAIRMAN said, the debt was admitted, and it would be paid out of the first available money. (Hear, hear.)

A PROPRIETOR inquired, what they charged for coal?

Mr. STOOKS, the engineer, said the charge was 1½d. per ton per mile; more than was charged in this country, but then the coal was necessitated to come over their line.

Mr. HARRISON thought, as there was 43,000*l.* due as interest, it would be advisable to pay the same by way of debenture, carrying 5 per cent. interest.

The CHAIRMAN replied, that it would be a subject for the consideration of the board at the next meeting.—The report was then adopted unanimously.

The CHAIRMAN then submitted a resolution for confirming the borrowing from the Belgian Government of the sum of 1,800,000 fr. (72,000*l.*), for the purpose of constructing the branch to Liege.

Mr. CAREY (a director) seconded the motion. He said the loan would be spread over a period of six years, so as to make it not trench too much on the early earnings of the line. (Hear, hear.) This arrangement showed the good faith of the Belgian Government, for this part of the line was the keystone of the undertaking. (Hear, hear.)

A vote of thanks was then passed to the chairman and directors, and to Mr. Stooks (the engineer), when the meeting separated.

THE ORIENTAL BANKING COMPANY.

The annual general meeting of the proprietors of this company was held at the banking-house, Walbrook, City, on Thursday, the 19th inst.

HARRY GEORGE GORDON, Esq., in the chair.

Mr. LANCASTER (the manager) read the notice convening the meeting. The report of the directors was then read, from which we extract the following:—

"The accounts laid before the meeting embrace the half-yearly periods at which the books are balanced—viz., at the branches in India, Ceylon, and China to the 1st March and 1st September, and in London to the 1st June and 1st December respectively, and show a profit for each half-year as follows:—For the first half-year, 24,001*l.* 4s. 3d.; for the second half-year, 26,471*l.* 6s. 5d., being a total profit on the year, after deducting all charges, of 50,472*l.* 10s. 7d. The continuance of cautiously restricted business, and the reduction of the bank's capital, agreed to at the last annual meeting, will account for the smaller amount of profit as compared with previous years; nevertheless, the profits realised must be considered very satisfactory. From the profits of the half-year ending the 1st June, a dividend of 3½ per cent. was declared on the 15th June, and the directors have appropriated the amount for a similar dividend for the half-year ending the 1st Dec., making a dividend for the year of 7 per cent., and leaving a balance of 4650*l.* 10s. 7d. at the credit of profit and loss. The reserve fund continues intact at 112,000*l.*, and there remains also a balance of 1965*l.* 9s. 4d. at the credit of the contingent fund."

"The directors are happy to assure the shareholders that the bank is now free from the effects of the disasters of 1847, and that no bad debts of any kind have been incurred during the past year, with the exception of a missionary bill for 250*l.*"

The accounts were also laid before the proprietors.

The CHAIRMAN said, he considered the report so full and explicit, that it would be wasting their time if he was to add anything to it; before, however, asking them to pass it, he would afford this opportunity to the proprietors for asking any questions with regard to the business of the bank: he should only be too happy to give every explanation in his power on any point that might be required. As no questions were asked, he thought they were all very well pleased, and he should, therefore, propose that the report now read be approved and adopted. (Applause.)

The report was passed unanimously.

The CHAIRMAN said, the next part of their proceedings was to appoint two auditors for the examination of the accounts, and reporting the same to the proprietors.

Colonel BORTHWICK begged to move that General de la Motte and J. A. Gibb, Esq., perform the duties of the office. The accounts appeared so satisfactory, and the worthy chairman and directors gave so much attention to the subject, that he thought little trouble would be given to the auditors.—Capt. MATHEWS seconded the resolution, which was passed unanimously.

R. HARTLEY KENNEDY, Esq. (a director), moved that Messrs. Harrison and Marshall be re-elected directors.—The motion was seconded, and passed unanimously.

Colonel BORTHWICK moved that the new law passed at the last general meeting be now confirmed.—Mr. FULLER (solicitor to the company), read the resolution to the meeting.

Mr. HULSE could not understand it, neither could his friend on his left, and therefore requested some explanation.

Mr. FULLER observed, that this altered measure was agreed to at the general meeting of last year, and only now waited for confirmation. The old proposition was, that all shares on hand, to the extent of 6000, should be sold, or otherwise disposed of, in the month of January, 1852. The object of the new law, which was made at the suggestion of a party in India, and also in this country, was to cancel them, so that they could not be sold or thrown upon the market. This new law was passed unanimously at the meeting in December, 1849.

Mr. HULSE: These shares having been purchased by the bank, it now possesses them.—Mr. FULLER: It is stated 6000.

R. H. KENNEDY, Esq., said, the shares so purchased went to the reduction of capital. They had an original capital of 2,000,000*l.*, half paid up—that was to say, 900,000*l.* odd actually paid up: their capital was now 642,000*l.* They had, then, so much more capital than they could profitably employ, and it was, therefore, thought advisable to purchase in shares at a time when they were at a discount. This operation would serve two purposes—first, by reducing their capital not required; and, secondly, by relieving the market of a number of shares, which might have brought the remainder to a discount.

Mr. HULSE said they had decreased 6000 shares, and yet he had considered they had made the prices of the shares no better than before.—The resolution was passed unanimously.

The CHAIRMAN said, the next resolution was respecting the Bank of Ceylon. The proprietors must be aware of the exertions of the directors to get for the Oriental Bank a charter, or common Act, to sue and be sued. They had knocked at the door of the Treasury, as well as the India-house, to no purpose. This opportunity seemed to give them some kind of *status*. With this view the directors made arrangements with the Bank of Ceylon. This island being looked upon as a very wealthy place, was supposed to require the services of two banking establishments. It was afterwards found out that one well-conducted establishment, like that of the Chartered Bank, was sufficient, and which might have been to this bank a very formidable rival. The directors had, therefore, got the Ceylon Bank handed over to them without encumbrances or liabilities, which was another great advantage. (Hear.)

The resolution for approving the conduct of the directors in taking now the Ceylon Bank, and granting them full power to carry the arrangements into effect, was passed unanimously.

Mr. HULSE said this company had been keeping up an agency in Ceylon during the past year, and he wished to know how much cash had been sent there, and what profit had arisen from it. (Hear.)

The CHAIRMAN wished to be excused answering that question—not from any indisposition to give information, but because it would be extremely impolitic to state the amounts

Mr. HULSE could not see why they should not be in possession of all the moneys employed in their different agencies. They knew they got their 7 per cent., but he wished to see how it was arrived at.

The CHAIRMAN said, the only reason of his objection was, that it might lead to rivalry in India, if it were seen that any branch left a larger profit than others. (Hear, hear.)

Mr. HULSE: You have the monopoly of banking in India.

The CHAIRMAN could not see that; it was true the Bank of Ceylon could not oppose them, their shares being at 50 per cent. discount. It was not at the profit of a single branch, but at the profit of all the branches it was expedient to look.

Mr. HULSE did not agree with that notion; and would not suppose any branch did not pay the company.

The CHAIRMAN hoped the management of their affairs was such as to induce the proprietors to believe that the directors would abandon anything that was unprofitable. (Hear, hear.) It was true they had a branch at Singapore; and the last reports gave the result as most satisfactory. (Hear, hear.)

Mr. HULSE having mentioned the different branches of the company, insisted upon there being no fear of rivalry; and that this company had the monopoly in India.

The CHAIRMAN said, there was another resolution for changing the day for balancing their accounts. The resolution was as follows:—"That the books of the London office be balanced on the 1st Sept., to conform to the period of balance at the branches, instead of on the 1st Dec., as heretofore."—It was passed unanimously.

Mr. GIBB said, there was an impression near him that they would have another set of directors with this Ceylon Bank.—The CHAIRMAN replied, that all would remain under the same management. (Hear, hear.)

R. H. KENNEDY, Esq., said, he thought the proprietors would willingly accord their thanks to the chairman for the manner in which he had performed the duties of his office on that occasion; and that they would go beyond, and say that they were equally due to that gentleman for the able manner in which he had executed his duties as chairman throughout the year. (Applause.) He could say, from experience, that their chairman was invariably attentive to his duties; and the great anxiety and attention he devoted to the concern would lead many to think he was the head of a private banking-house, rather than the chairman of a joint-stock company. He could assure the meeting, in conjunction with his colleagues, that their thanks were eminently due to Mr. Gordon, not only for his great application, but also for the very able manner in which he always performed the duties of his office. (Applause.)—Gen. DE LA MOTTE had great pleasure in seconding the motion, which was passed unanimously.

The CHAIRMAN returned thanks for this acknowledgment of his humble services, and he hoped to earn the same approbation of his conduct 12 months hence. The business being over, he would only observe, that they might all return home, rejoicing that they were not only shareholders of the Oriental Bank, but of the Ceylon Bank likewise.

The meeting then separated.

RAILWAY SHARES—PUBLIC AUCTION.

MESSRS. R. TREDINNICK & CO. beg to inform the public that they intend to SELL, BY PUBLIC AUCTION, every DESCRIPTION of MINING and RAILWAY PROPERTY; and that their NEXT SALE will be HELD on WEDNESDAY, January 1, 1851, at Twelve for One o'clock precisely, at their AUCTION ROOMS, HALL OF COMMERCE, THREADNEEDLE-STREET, LONDON, where catalogues may be obtained the previous day.—Orders for sale are respectfully requested to be sent on or before Monday morning in each week, so that they may be inserted in the catalogues.

Messrs. R. TREDINNICK & CO. beg to OFFER their SERVICES in the PURCHASE or DISPOSAL of SHARES in MINES. With an extensive connection in the several mining districts, they will be happy to acquire and afford every information connected therewith, and which may be at all times obtained on application at their offices.

Hall of Commerce, Dec. 14, 1850.

THE EAST INDIAN RAILWAY COMPANY are desirous of RECEIVING TENDERS for the SUPPLY of TEN THOUSAND TONS of RAILS.—Specifications and forms of Tender may be had at the Company's offices, 50, Old Broad-street, London, or at the office of the Company's engineer, J. M. Rendel, Esq., 8, Great George-street, Westminster.

Tenders, endorsed "Tenders for Rails," are to be delivered to the Company's Secretary before noon on the 13th day of January, 1851.

The Company do not bind themselves to accept the lowest or any Tender.

50, Old Broad-street, London, Dec. 17, 1850. D. L. NOAD, Secretary.

NAMUR AND LIEGE RAILWAY.—At the FIFTH ANNUAL GENERAL MEETING of the proprietors of the NAMUR AND LIEGE RAILWAY, held at the London Tavern, Bishopsgate-street, London, on Monday, the 16th day of December, 1850, the following resolutions were proposed and carried unanimously:—

1. Resolved,—That the report of the Directors, with the statement of accounts, now read to this meeting, be received and adopted, and be forthwith printed and circulated amongst the proprietors.

2. Resolved,—That the convention entered into by the Board with the Belgian Government, jointly with the Bank of Liege, for the loan of 1,800,000 fr. (£72,000) to this Company, be confirmed by this meeting, and the same is hereby ratified and confirmed accordingly.

3. Resolved,—That the thanks of the proprietors are due, and are hereby given, to Mr. Stooks, the resident engineer of the Company, for the very able manner in which he has superintended the execution of the works in Belgium.

ROBERT M. BATES, Vice-President.

4. Resolved,—That the grateful thanks of this meeting are justly due, and hereby cordially given, to the Vice-President and Directors, for their zeal, ability, and perseverance in conducting the affairs of this Company. GEORGE GRANT, Secretary.

London, Dec. 16, 1850.

NATIONAL PROVINCIAL BANK OF ENGLAND, 112, Bishopsgate-street, Dec. 17, 1850.—The Directors of the NATIONAL PROVINCIAL BANK OF ENGLAND hereby give Notice, that a HALF-YEARLY DIVIDEND, at the rate of 6 per cent. per annum, will be PAYABLE on the Company's stock on and after the 17th of January next, when the dividend warrants will be obtained at the Company's office, 112, Bishopsgate-street, or at the different branches. The transfer books will be closed on and after Tuesday next, the 24th inst., until the dividend becomes payable.

By order of the Court of Directors,

DAN. ROBERTSON, Agent and Manager.

NOTICE.—The Court of Directors of the ST. KATHERINE DOCK COMPANY do hereby give Notice, that a GENERAL HALF-YEARLY MEETING of the proprietors of the ST. KATHERINE DOCKS will be HELD at the Dock-house, Tower-hill, in the county of Middlesex, on Tuesday, the 21st day of January next, at Twelve o'clock at noon, for the purpose of declaring a Dividend on the capital stock of the Company for the half-year ending the 31st inst., when the accounts of receipt and expenditure of the said Company for the year ending the 31st inst. will be laid before the proprietors, which accounts will be ready for examination or inspection by such proprietors on and after Tuesday, the 7th day of January next.

By order of the Court, JOHN HALL, Secretary.

The books of the Company will close on Saturday, the 21st inst., and open on Wednesday, the 29th day of January next.

N.B.—The chair will be taken at One o'clock precisely.

St. Katherine Dock-house, Dec. 10, 1850.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

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Further particulars and terms of license, &c., may be obtained on application to Mr. Jee, civil engineer, No. 6, John-street, Adelphi, London; also from the London agents, Messrs. GARDEN and MACANDREW, 34, Dowgate-hill; and the Scotch agents, Messrs. W. and J. H. Johnson, 166, Buchanan-street, Glasgow and 20 St. Andrew's-square, Edinburgh.

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EXHIBITION OF 1851.—T. P. AUSTIN, proprietor of PEELE'S COFFEE-HOUSE, FLEET-STREET, begs respectfully to inform his friends and the public generally, especially those interested in the forthcoming GREAT EXHIBITION, that he has recently NEARLY DOUBLED THE SIZE OF HIS ESTABLISHMENT, which will enable him to afford increased comfort and convenience to those honouring him with their patronage. The FILES OF NEWSPAPERS and PERIODICALS, for which Peele's Coffee-house is so celebrated, containing all the reports of the Royal Commissioners, will be available to those visiting this establishment.

*** The *Mining Journal*, in addition to all Publications connected with the Mining Interests, are regularly filed.—*Bed and Breakfast, 3s., or £1 per week.*

SEWERAGE OF LONDON.—The ATTENTION of the COMMISSIONERS appointed to determine upon the MOST EFFICIENT MATERIAL for the CONSTRUCTION of the SEWERS OF LONDON, is particularly directed to the ASPHALTE OF SEYSSEL, which more than any other material is applicable to the CONSTRUCTING and INTERNAL COATING of BRICK CULVERTS and OTHER CHANNELS for DRAINAGE.

The experiments made by the Royal Artillery on the embrasures of Plymouth Citadel, constructed of Seyssel Asphalte Brickwork, under the orders of the Hon. Board of Ordnance, have fully proved the superiority, adhesiveness, and strength of Seyssel Asphalte over all other cementitious compositions. A printed account of these experiments can be had on application to J. FARRELL, Secretary, Seyssel Asphalte Company—"Claridge's Patent"—Established 1838.

Note.—The application of the Asphalte of Seyssel is specially recommended by the Commissioners on the Fine Arts for covering the ground line of brickwork in marshy situations, and it has been suggested that it would be peculiarly applicable for covering the *areas* of closed *grave yards*, and for the construction of *catacombs*.

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W. BROTHERTON & CO. take the present opportunity of again bringing before the notice of the public their PATENT MACHINE and LAMP OIL, and at the same time thanking their friends for the liberal support and patronage they have received during the past four years. Their best thanks are also tendered to those practical engineers, and scientific gentlemen, through whose kind communications, upon lubrication and frictional resistance, they have been enabled to bring their PATENT OIL to a state of chemical perfection not previously contemplated.

The important properties of W. B. & Co.'s oil are the peculiar softness of its body, its limpidity under all ordinary temperatures, and its unctuous nature. Being of a non-drying quality, it produces a complete separation of the parts when in motion—thus becoming itself the working body, and preventing friction; its chemical purity is such, that no oxidation takes place on the metals, or alloy forming the bearings; consequently those evils so perplexing to engineers, and so destructive in their tendency, are at once removed, and thereby the value of the oil more than saved.

W. BROTHERTON & CO. consider it unnecessary to publish any of the numerous and flattering testimonials they have received; but they will at all times feel happy in giving every information on the subject, and in receiving any communication likely to further the object they have in view.

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COUNSEL TO INVENTORS OF IMPROVEMENTS IN THE USEFUL ARTS.—Price 2s. 6d., cloth.

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NEW CORNISH JOURNAL.—On Friday, the 3d of January, 1851, will be published the First Number of a WEEKLY NEWSPAPER, to be entitled the CORNISH TELEGRAPH, AND MINING, COMMERCIAL, AND AGRICULTURAL GAZETTE. The *Cornish Telegraph* will furnish the public with full and accurate intelligence of all matters general and local; and will present especial claims to consideration as giving correct accounts of the financial condition of the mines, with all new discoveries, and other general information, which will make it a safe guide to the mining speculator. Weekly reports on the state of commerce, from the most authentic sources, will be given; the shipping news will receive particular attention, and the agricultural interest will be consulted by devoting a portion of the paper to the best miscellaneous information and improvements in husbandry. All local intelligence, such as the assizes, sessions reports, accounts of public meetings, proceedings of the Stannary and County Courts, &c., will be given as fully as in any provincial journal. The *Telegraph* will maintain a thoroughly independent position on all questions of general politics, and is not the organ of any religious party whatever.

The *Telegraph* will be issued at Penzance every Friday morning, and will be forwarded thence by mail to all parts of the kingdom.

Orders for advertisements, and other communications, to be addressed to the Editor, at Messrs. Rowe and Son's, printers and publishers, Penzance.

Penzance, Dec. 4, 1850.

THE MINING ALMANACK, FOR 1851: under the immediate Sanction and Patronage of his Royal Highness PRINCE ALBERT, K.G., Lord Warden of the Stannaries, Chief Steward of the Duchy of Cornwall and Devon, &c. By HENRY ENGLISH, Editor of the "Mining Journal"—"Mining Review," &c.

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IMPORTANT TESTIMONIAL.

Church-street, Folkestone, Nov. 23d, 1848.

SIR,—Having been troubled with a very bad cough for the last eight months, I applied to Mr. Hammon, chemist of this town, for some relief; he recommended me your "Cough Lozenges," which I am happy to say cured me in a week. I beg most cordially to recommend them, and request you will not hesitate to make this letter public; such a valuable remedy cannot be too highly recommended. JOHN HILL, Esq.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [December 21, 1850.